D-T3/T30

SERVICE MANUAL

D-T3:
US Model
Canadian Model

D-T30:
AEP Model
UK Model
AUS Model
E Model

Discman

SPECIFICATIONS

CD section

System: Compact disc digital audio system

Laser diode properties: Material: GaAlAs
Wavelength: 780 nm
Emission duration: Continuous
Laser output: Max. 0.4 mW*
*This output is the value measured at a distance of about 1.6 mm from the objective lens surface on the Optical Pick-up Block.

Frequency response: 20–20,000 Hz ±½dB (Measured by EIAJ CP-307)

Outputs (DC 9 V): Line output (stereo minijack)
Output level 1 V rms at 47 kilohms
Load impedance over 10 kilohms
Headphones (stereo minijack)
output level 10 mW at 32 ohms

Radio section

Frequency range:
FM: 87.6–108 MHz
87.6–107 MHz (AEP MODEL EXPECT ITALY MODEL)
87.5–108 MHz (ITALY MODEL)
AM: 530–1,605 kHz
526.5–1,606.5 kHz (ITALY MODEL)
FM: Headphones cord or connecting cord antenna
AM: Built-in ferrite bar antenna

General

Power requirements: Supplied:
- Rechargeable battery pack BP-3 (AE6 MODEL OPTIONAL)
- DC IN 9 V jack accepts; Sony AC power adaptor (AE6 MODEL OPTIONAL)

Where used	Operating voltage
US, Canadian MODEL	120 V AC, 60 Hz
AUS, E MODEL	110~240 V AC, 50/60 Hz
UK MODEL	240 V AC, 50 Hz
AEP MODEL	220 V AC, 50 Hz

– Continued on page 2 –

CAUTION

- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNES DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

MICROFILM

FM/AM CD COMPACT PLAYER

SONY®

AUD

Optional:
- Sony EBP-3 battery case using four size L40 (LR6) batteries, 6 V (AE6 MODEL SUPPLIED ACCESSORIES)
- DC IN 9 V accepts:
  Sony DCC-120 car battery cord for use on 12 V car battery

Power consumption 1.6 W DC

Dimensions Approx. 130×41.2×137.7 mm ($5\frac{1}{8}\times1\frac{5}{8}\times5\frac{3}{8}$ in.) (w/h/d) not incl. inclined part (depth), projecting parts and controls
Approx. 139.7×43×138.8 mm ($5\frac{1}{2}\times1\frac{3}{4}\times5\frac{1}{2}$ in.) (w/h/d) incl. projecting parts and controls

Weight Approx. 480 g (1 lb 1 oz) net
Approx. 660 g (1 lb 7 oz) incl. rechargeable battery pack

Battery life

Battery	Continuous disc playing	Continuous radio
Sony alkaline battery	Approx. 5 hours.	Approx. 40 hours.
Sony rechargeable Battery pack BP-3	Approx. 3 hours. (fully charged by 8 hours charging)	Approx. 25 hours. (fully charged by 8 hours charging)

(Notes on charging)
- For charging, use only the supplied AC power adaptor. If not, the player will be damaged.
- The CD player can also be operated during charging. In this case, approx. 24 hours are necessary for a full charge. However, when the CD player does not operate normally, stop it and charge the unit for a while.

Supplied battery pack (BP-3)
Output voltage 6 V
Capacity 1000 mAh
Dimensions Approx. 31.3×17.3×118.4 mm ($1\frac{1}{4}\times1\frac{11}{16}\times4\frac{3}{4}$ in.) (w/h/d)
Weight Approx. 180 g (6.4 oz)

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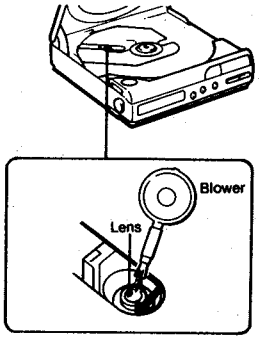
– MAINTENANCE –

CLEANING THE CASING
Clean the casing with a soft cloth slightly moistened with water or mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine as they may mar the finish of the casing.

CLEANING THE LENS
If you have accidentally touched the lens with a dirty finger or the dust on the lens prevents the player from operating properly, open the disc compartment lid and clean the lens.

To remove dust
Blow on the lens a few times with a commercially available blower. Brush the dust away in the direction of the arrow, then blow on the lens again.

If the lens is still dirty after you have followed the above instructions and the player still does not function properly, please consult your nearest Sony dealer.



NOTES ON COMPACT DISCS

Handle the disc by its edge, and to keep the disc clean do not touch the rainbow colored surface.

Do not stick paper or tape nor write anything on the labeled surface.

Before playing, clean the disc with the optional cleaning cloth.
Wipe the disc fromt the center out.

Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for analog discs.

After playing, store the disc in its case.

Should any problem persist after you have made these checks, consult your nearest Sony service facility.

Disc play does not start.
- The HOLD swith is set to the direction of the arrow.
- The disc is inserted with the labeled surface down.
- The disc is incorrectly inserted.
- Dusty or defective disc
- Dirty or dusty lens
- The disc compartment lid is not closed.
- Moisture condensation.
- The AC power adaptor is not plugged into the wall outlet.
- Weak battery
- The car battery cord is not firmly connected.

No sound from headphones
- The headphones plug is not firmly connected to the PHONES jack.

No sound from speakers
- Incorrect connections
- The amplifier is not turned on.

Skipping of sound
- Dirty or defective disc
- Dirty lens
- Strong vibration

– CAUTION FOR ELECTROSTATIC BREAKDOWN –

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK (KSS-160A)

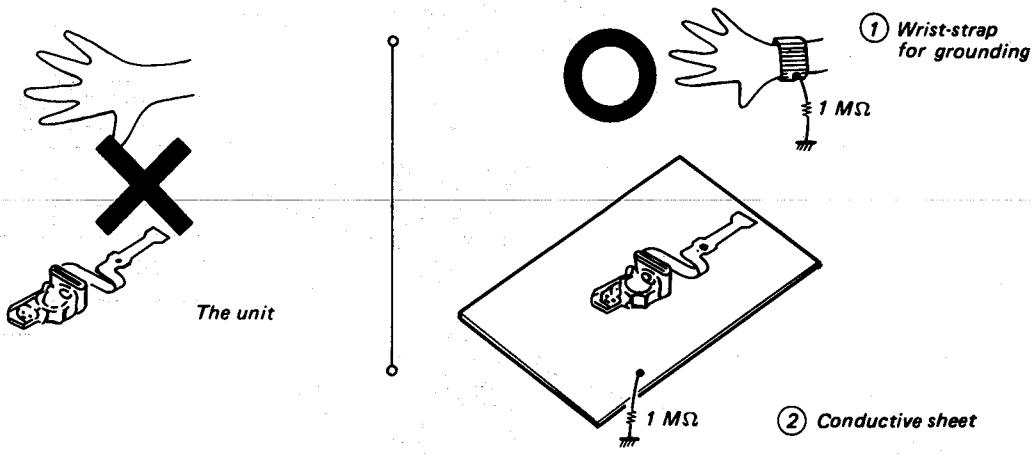
The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
The printed matter below is included in the repair parts. During repair, use the procedure in the printed matter.
The flexible board is easily damaged and should be handled with care.
The following method is an example for reference purposes:

1. Place a conductive sheet on the workbench. (The black sheet used as repair parts wrapping).
2. Place the set on the conductive sheet so that the chassis touches the sheet. (This makes it the same potential as the conductive sheet).
3. Place your hands on the conductive sheet. (This makes them the same potential as the sheet).
4. Remove the optical pick-up block.
5. Perform work on top of the conductive sheet. Be careful that clothing does not touch the optical pick-up block.

Printed Matter Included in the Repair Parts

When opening or repairing the unit, the procedure for grounding as follows is required to prevent damage caused by static electricity.

1. Grounding for the human body
   Be sure to put on a wrist-strap for grounding (with impedance lower than 10^8 Ω) whose other end is grounded. The strap works to drain away the static electricity build-up on the human body.
2. Grounding for the work table
   Be sure to lay on the table a conductive sheet (with impedance lower than 10^9 Ω) such as sheet of copper, which is grounded.
3. As static electricity build-up on clothes is not drainded away, be careful not to let your clothes touch the unit.



– SERVICE MODE –

SERVICE MODE (service program)

The program on this set selects either service program routine or normal routine after power supply is connected and a RESET signal enters. When it enters service program routine, the microcomputer brings the necessary job from each subroutine corresponding to the key input, and executes that job. Operation check can be performed efficiently using this mode. The operation method of service mode is explained below.

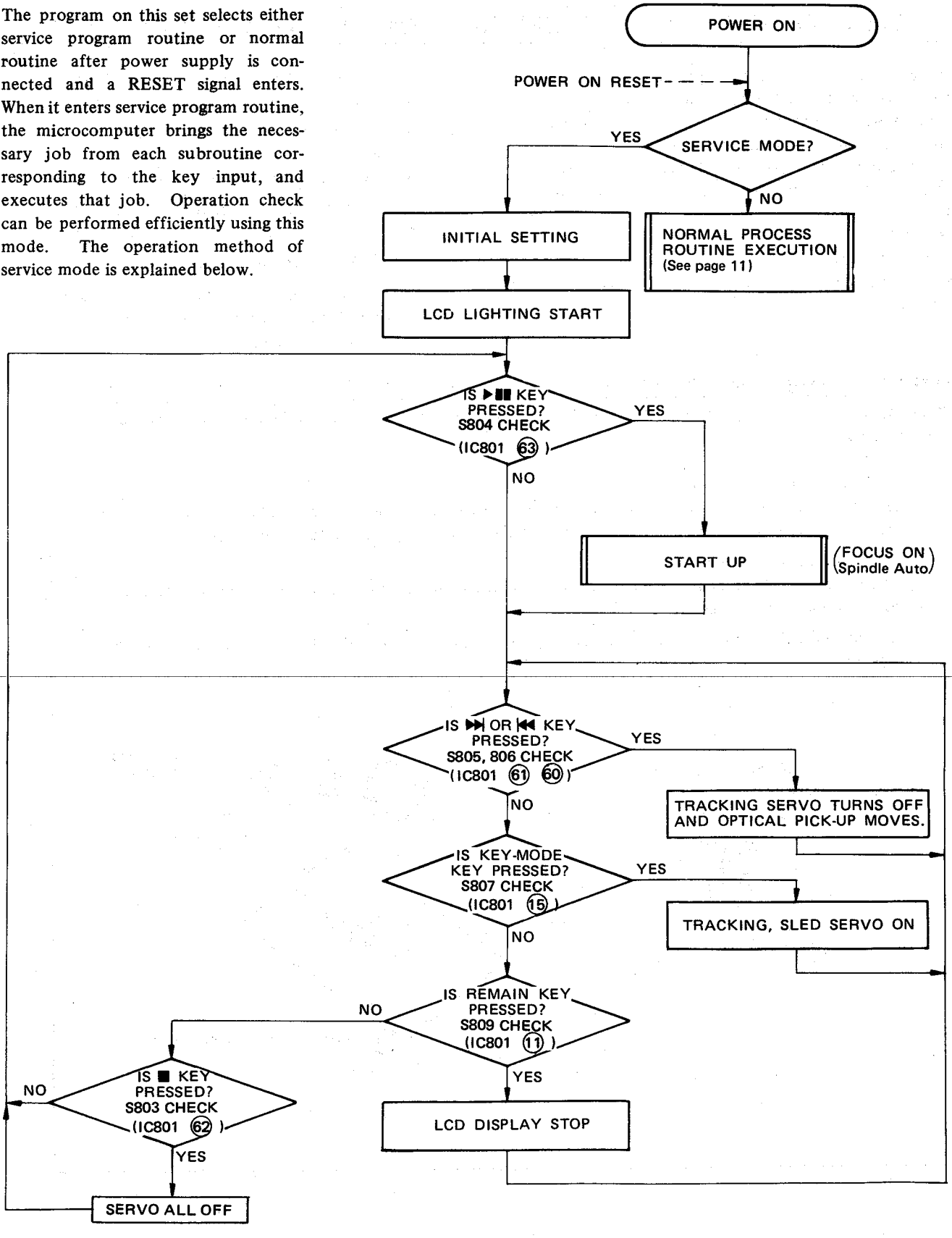


Fig. 1 Service Program Flow Chart

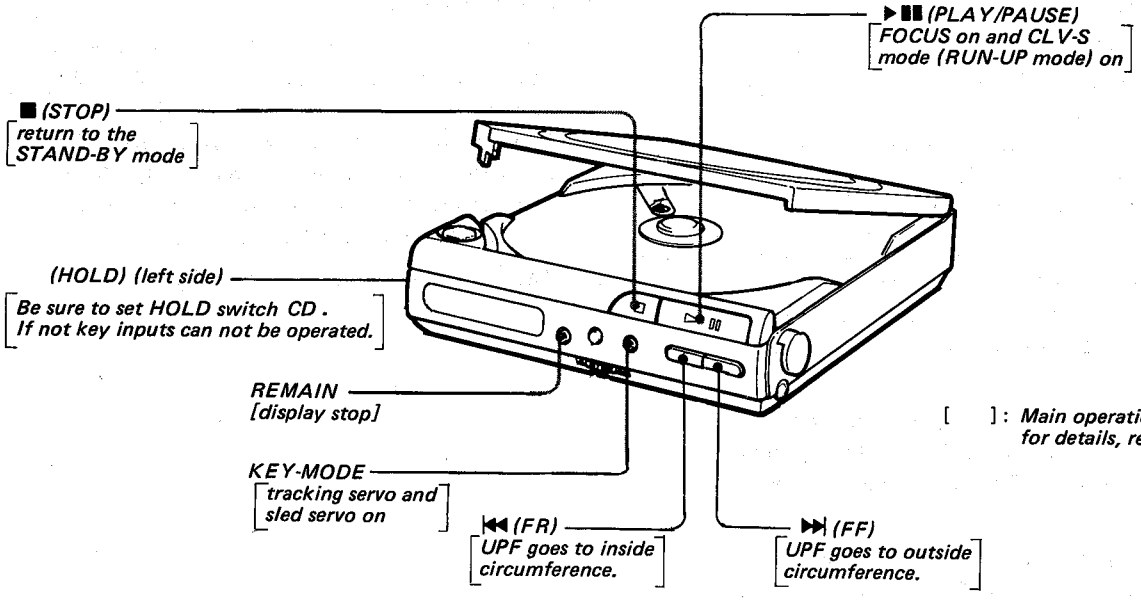

▶II (PLAY/PAUSE)
FOCUS on and CLV-S mode (RUN-UP mode) on
■ (STOP)
return to the STAND-BY mode
(HOLD) (left side)
Be sure to set HOLD switch CD .
If not key inputs can not be operated.
REMAIN
[display stop]
KEY-MODE
tracking servo and sled servo on
⏮ (FR)
UPF goes to inside circumference.
⏭ (FF)
UPF goes to outside circumference.
[ ] : Main operation in service mode
for details, refer to step 2.

Fig. 2 Key Positions

Step 1 (Service Mode setting method)

1. Turn the HOLD switch OFF with the external power supply not plugged in (no power applied to set) and press the ▶II key.
   (This is to discharge C801 connected to the base of transistor Q803 connected to IC801 pin (56) (RESET).)
2. Solder jumper TEST-1 terminal.
   (IC801 pin (17) (BATT-E) pin is grounded.)
3. Plug in external power supply.
   This puts the set into service mode.
4. If the set is not set into service mode, disconnect the TEST-2 terminal as shown, and plug in external power supply again.

TEST-2
Remove the solder for service mode.
(After checking or adjusting in service mode, be sure to connect with solder.)

TEST-1
Solder jumper for service mode.
(After checking or adjusting in service mode, be sure to remove this solder jumper.)

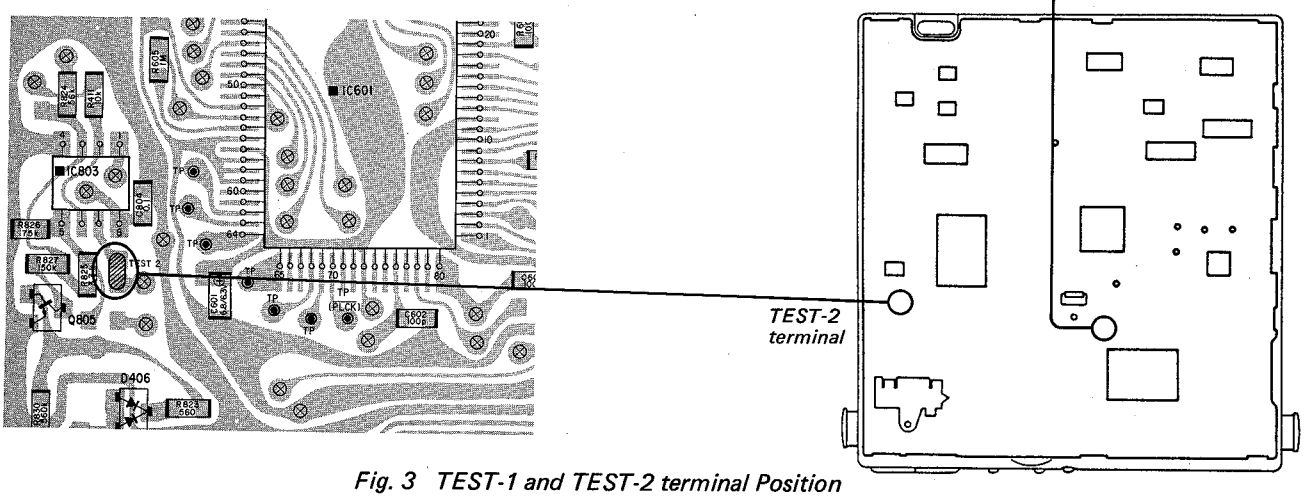


Fig. 3 TEST-1 and TEST-2 terminal Position

Step 2 (Service Mode operation)

1. When service mode is set, the display will change 6 times, and those 6 changes will be repeated over and over.
   With this the LCD display should be present in service mode. Even if LCD does not display, other operations will be performed.
2. When ▶▶| or |◀◀ key is pressed, the UPF moves to the inside or outside circumference. Tracking servo and sled servo go off when this is done, so press KEY-MODE to turn on the tracking servo if necessary.
3. When REMAIN is pressed, the display stops. When REMAIN is released, the display continues to change. This allows check of each segment.
4. When ▶II key is pressed, CLV-S (pull-in mode) starts while performing focus search. When there is no disc installed, focus search is repeated several times while disc motor is rotating. However as for rotating disc motor is one time.
5. When KEY-MODE is pressed, tracking servo, sled servo and CLV-A (servo during PLAY) go ON.
6. When 4 and 5 are performed, the disc begins to play. At this time, the top panel should be closed and S802 are to be ON.
   When S802 is OFF, CLV-S does not work properly and the disc continues to rotate while repeating focus search. A sound is not produced as muting is ON.
7. Servo go off when ■ key is pressed. (return to the step 1.)

Step 3 (Service Mode release)

1. First be sure to unplug the external power supply, then remove the BATT-E point solder jumper.
   (During service mode, C801 is discharged by unplugging the external power supply. Therefore, microcomputer IC801 is reset by next plugging in the external power supply.)
2. The set will now operated normally.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe, from more than 30 cm away from the objective lens.

Laser Diode Check Procedure

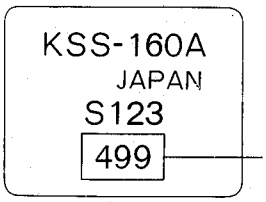
The laser diode on this set will not emit unless the top panel is closed and S802 (leaf SW type) is turned on. The laser diode will always emit even if focus search is not performed in service mode.
The laser diode is checked using the current value which flows to the laser diode inside the UPF.

Procedure 1 (service mode or normal operation)
Check the laser diode emission with the eye.

1. Open upper panel.
2. S802 on as Fig. 5.
   (In service mode, this operation is not necessary.)
3. Press the ▶II key.
   (In service mode, this operation is not necessary.)
4. Observe the objective lens and confirm that the laser diode is emitting light. At this time, the laser diode goes on about 6 seconds due to focus serarch. If it does not, APC circuit or UPF is defective.

Procedrue 2 (service mode or normal operation)
Check by the curent with flows in the laser diode.

1. Close the top panel.
2. Remove the main board and read the current value on the label affixed to the UPF.
   (Label on UPF)



   The current value varies with the set.
3. Connect a VOM as shown in Fig. 6.
4. Press the ▶II key.
5. Calculate the current by the VOM reading.
   VOM reading (V) ÷ 16.5 = current (A)
   ex. VOM reading = 0.78 V
   $0.78 \div 16.5 = 0.0473$ (A) = 47.3 (mA)
6. Confirm that the ammeter reading is within the range given below.
   value on label $^{+5}_{-11}$ mA (25°C)
   variation relative to temperature:
   0.4 mA/°C
   (Current increases when temperature rises and decreases when it drops.)
   If the value is more than the range given, APC circuit has been defective or the laser diode has deteriorated. If it is less, APC circuit or UPF is defective.

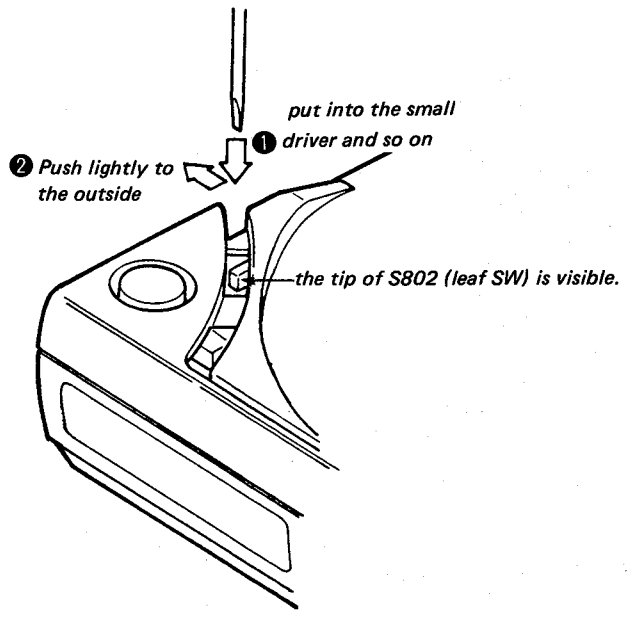


Fig. 5 Turning S802 on

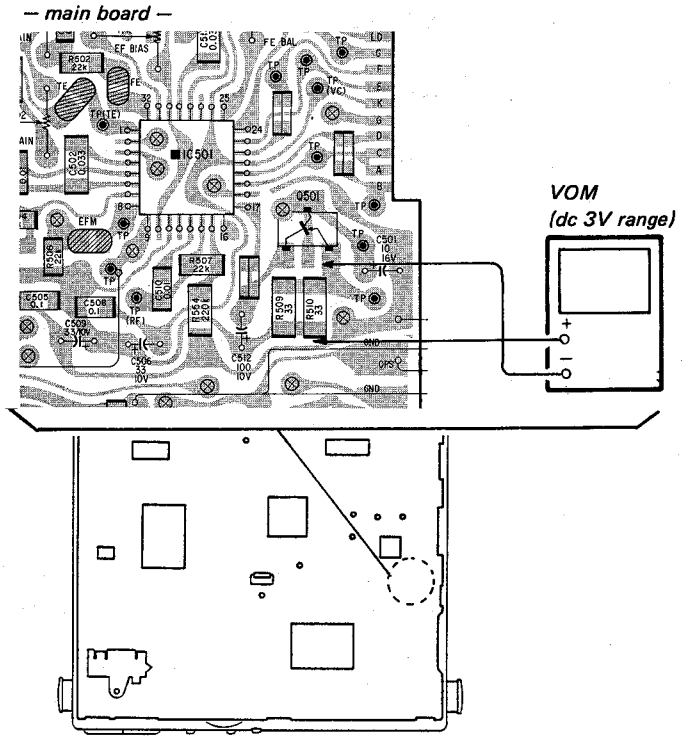
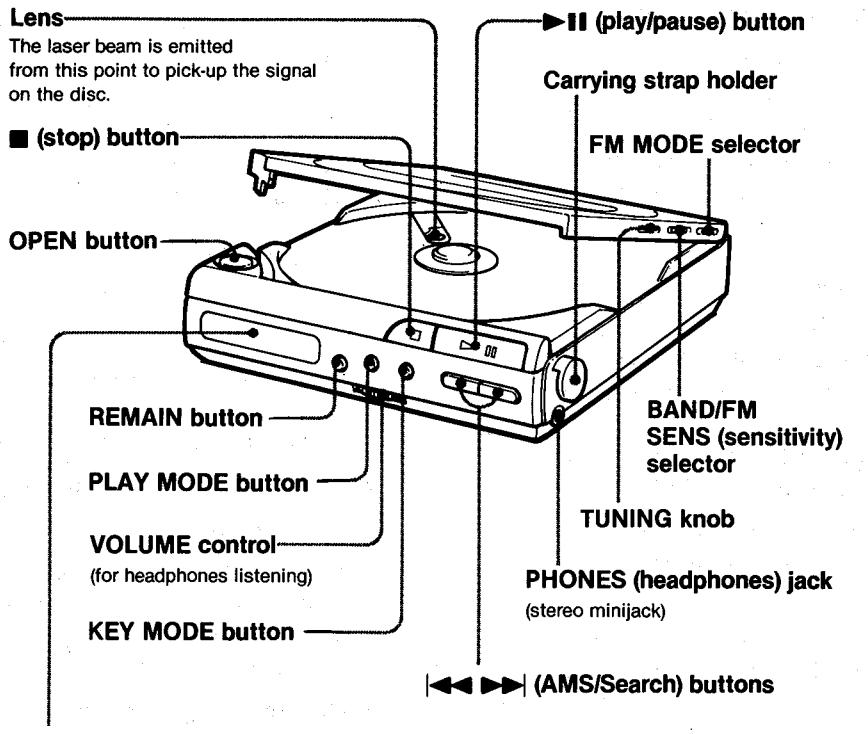
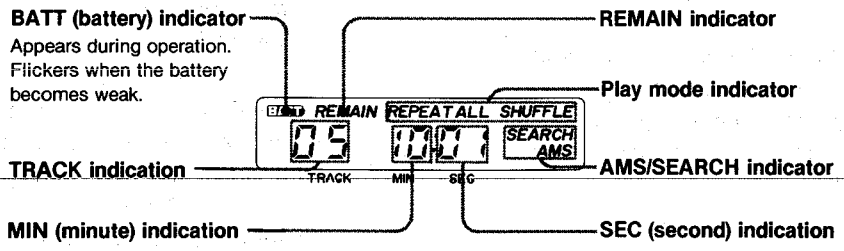


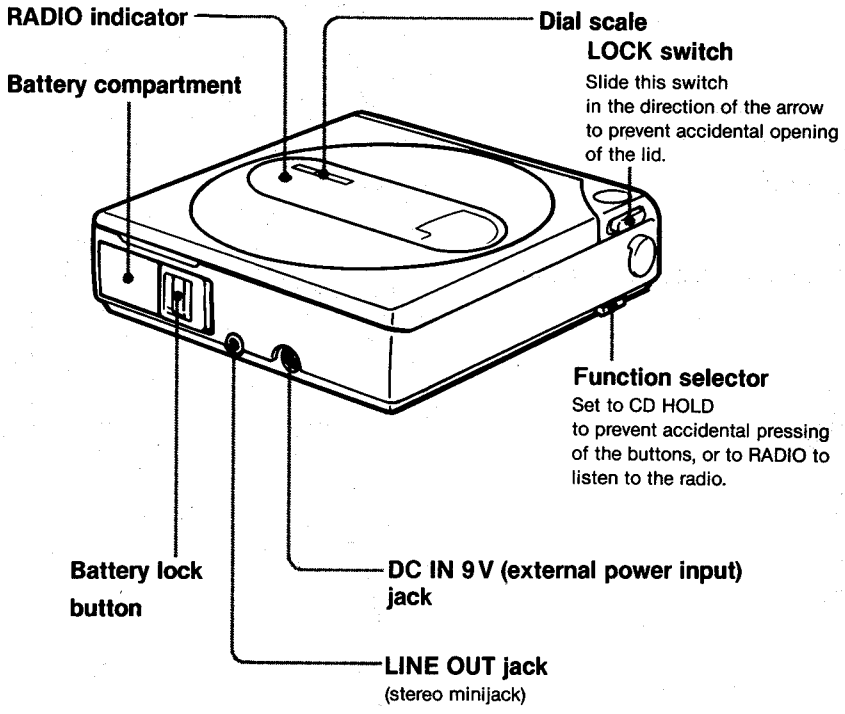
Fig. 6 VOM Connection

LOCATION AND FUNCTION OF CONTROLS



DISPLAY WINDOW

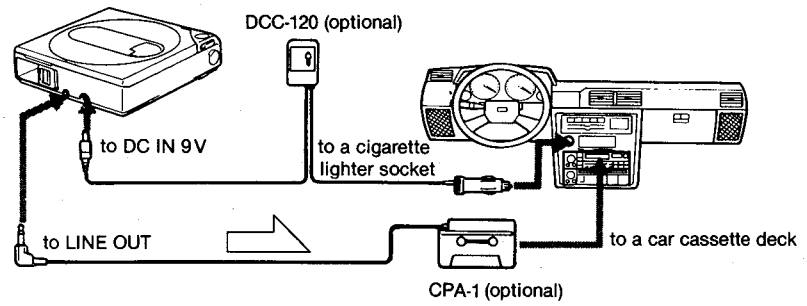



RADIO indicator
Battery compartment
Dial scale
LOCK switch
Slide this switch in the direction of the arrow to prevent accidental opening of the lid.
Function selector
Set to CD HOLD to prevent accidental pressing of the buttons, or to RADIO to listen to the radio.
Battery lock button
DC IN 9 V (external power input) jack
LINE OUT jack
(stereo minijack)

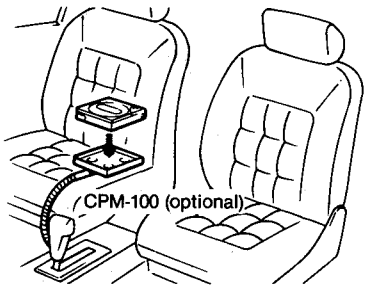
CAR BATTERY OPERATION

You can listen to the CD player in your car through a car cassette deck by using the Sony CPA-1 car connecting pack and the DCC-120 car battery cord, or you can use the Sony CPM-100 mount arm instead of the DCC-120.
(The power comes from the cigarette lighter socket.)

By using car battery cord (DCC-120)

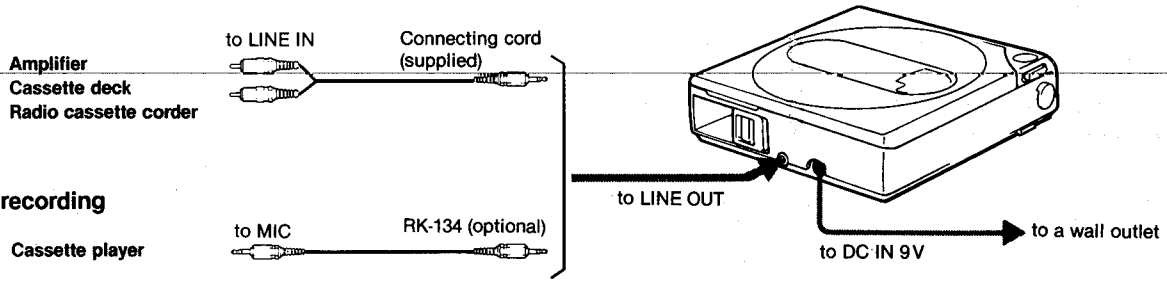


By using mount arm (CPM-100)



FOR SYSTEM CONNECTION

For monitoring through speakers and for recording



Notes on car use

- When using the CPA-1 only: Use the supplied battery pack as a power source.
- When using the DCC-120 only: Use headphones for monitoring. Sound will not come out from the car stereo speakers.
- Place the CD player on a surface with the least vibration.

For further details, refer to the instruction manual of each product.

Notes on connection

- Turn off the amplifier before making connections.
- Plug the white plug into the L (left channel) jack, and the red plug into the R (right channel) jack.
- Be sure to insert the cable connectors firmly into the jacks.
  Loose connection may cause hum and noise.
- Be sure not to connect the CD player to the PHONO input jacks of the amplifier.
- If the CD player causes interference to radio and television reception, turn off the player or move the player away from the receiver.
- Since the CD system offers a wide dynamic range, the peaks of the high level inputs are recorded with high fidelity, and the noise level is very low. Do not turn up the volume while listening to a portion with no audio signals or very low level inputs. If you do, the speakers may be damaged when a peak level portion is played.

SECTION 1
OUTLINE

CIRCUIT DESCRIPTION
[SYSTEM CONTROL 4-BIT MICROCOMPUTER] (IC801)

Table 1 explains the ports and Fig. 7 is the program flor chart. When power is applied to the set, a RESET signal is applied to the microcomputer and the program starts. First judgement is made whether to go to service mode. (Service mode is explained on page 6~8.) When it goes to a regular mode, clock oscillation is stopped, stand-by occurs, and waiting for $\overline{\text{PB/PAUSE}}$ input results. Clock oscillation is stopped for saving power consumption.

When the PB/PAUSE button is pressed, the program continues on to the main routine, and continues running on the main loop until the STOP button is pressed or until some kind of trouble causes emergency stop to be generated.

The SUB-Q signal is applied to the serial data input port (PO3/SI) and SCOR to interrupt 1 port (INT 1), and SUB-Q is read into the RAM by the interrupt processing rountine in the main loop.

The following are the two types of interrupt processing:

(1) Timer/Counter overflow interrupt: by built-in counter (54.6 Hz)
(2) External interrupt: by SCOR (75 Hz)

Priority order is by number, in order from the lowest, and interrupt begins from high priority interrupt after the currently executed command is completed. On this set, first the loop turns at 54.6 Hz (18 msec) by interrupt (1) until servo is applied. Then when SUB-Q can be read in, interrupt (2) causes the loop to turn at 75 Hz (13.3 msec).

The above is an outline of the program. The main program features are listed below.

(1) Focus search is done 3 times.
(2) For normal STOP UPF is not stopped above the TOC area as before, but at music data area near the innermost circumference. For emergency stop due to OPEN or BATT EMP, it stops right away, where it is. During PLAY, the UPF searches for TOC and reads it, then begins playback.
(3) Search operation to inner circumference (⏮) is done by performing 1 track jump five times in a row and to outer circumference (⏭) is done by performing 1 track jump four time in a row.
(4) Service program is built-in. (Refer to next chapter.)
(5) FZC (Focus Zero Cross) is only detected when the lens goes up.

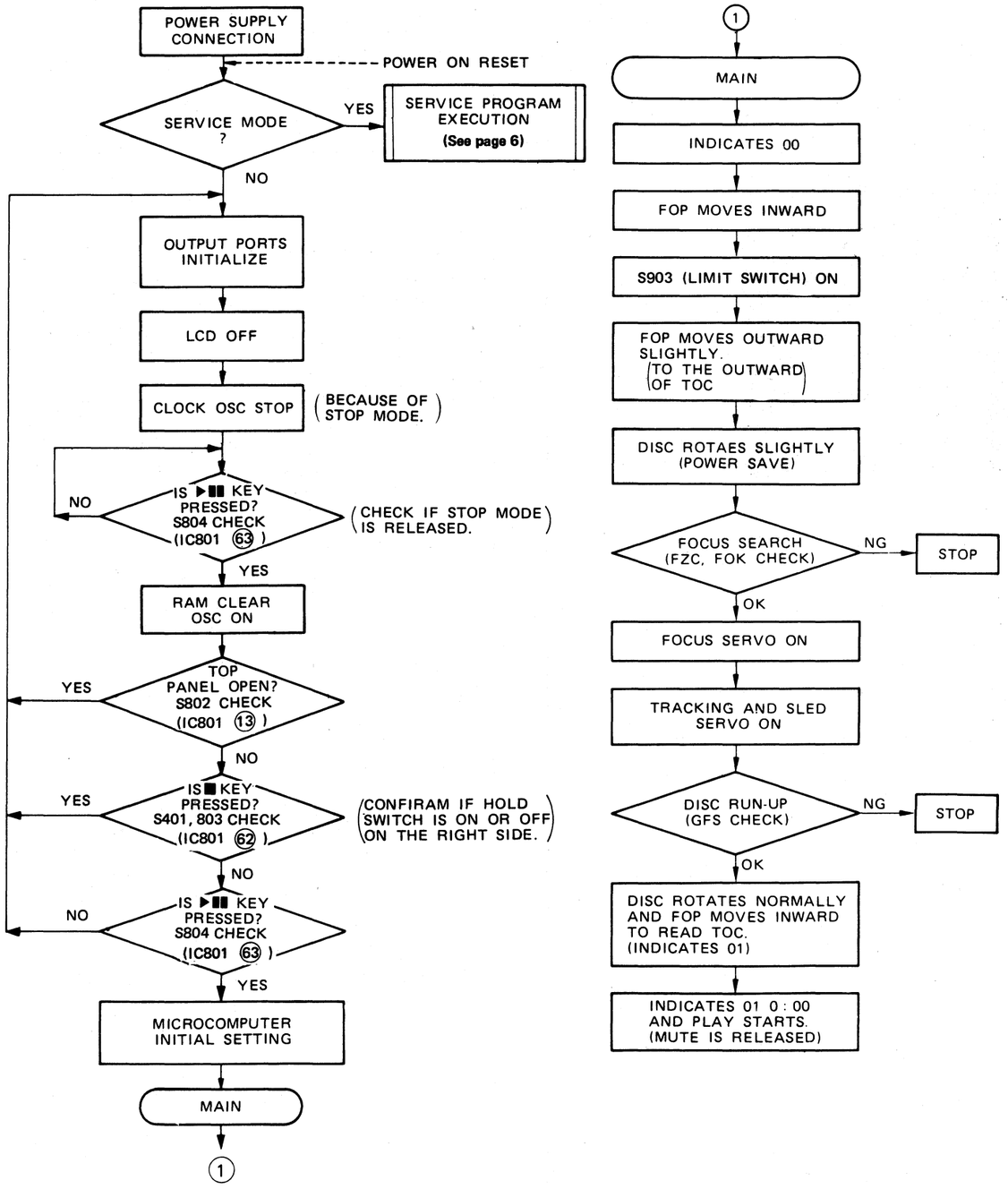


Fig. 7 Program Flow Chart

Table 1 Pin Functions IC801

Pin No.	Port Name	Signal Name	I/O	Function
1	NC	–	–	Not used
2	P32	DATA	OUTPUT	Serial data output pin to CXD1130Q (IC601) and CXA1082AQ (IC502).
3	P31	CLOCK	OUTPUT	When fowarding the serial data to CXD1130Q (IC601) and CXA1082AQ (IC502), CLOCK signal is input.
4	P30	LATCH	OUTPUT	When forwarding the serial data to CXD1130Q (IC601) and CXA1082AQ (IC502), LATCH signal is output.
5	P03/SI	SUB-Q	INPUT	Serial I/O data input pin. SUB-Q signal (information about the music address and emphasis, etc.) is input from CXD1130Q (IC601).
6	P02/SO	–	–	Not used.
7	P01/$\overline{SCK}$	SQCK	OUTPUT	Serial I/O shift-clock output to CXD1130Q (IC601) and SUB-Q signal is forwarded to the micro-conputer in CXD1130Q (IC601) by the rising (⌐) of shift-clock.
8	P63	MUTE	OUTPUT	Muting signal output pin.CXD1130Q (IC601), LINE output and HEADPHONE output are muted mode at "H".
9	P62	PEN	OUTPUT	Emphasis switching output pin of analog circuit. This pin outputs due to an emphasis signal in SUB-Q signal and switches the analog circuit. The circuit set about de-emphasis at "H".
10	P61	$\overline{PCON}$	OUTPUT	This output pin controls power ON/OFF. "L: Power ON "H": Power OFF
11	P60	$\overline{REM}$	INPUT	REM switch (S809) input pin.
12	P53	SENSE	INPUT	Input pin of SENSE output of CXD1130Q (IC601) and CXA1082AQ (IC502). When forwarding serial data to CXA1082AQ, the signal which monitors the mode of the specified servo circuit is input.
13	P52	$\overline{S\text{-}OPEN}$	INPUT	OPEN/CLOSE switch (S802) input pin. When this pin inputs "L", detects that the upper panel is open.
14	P51	$\overline{P\text{-}MODE}$	INPUT	PLAY MODE switch (S808) input pin.
15	P50	$\overline{K\text{-}MODE}$	INPUT	KEY MODE (AMS/SEARCH) switch (S807) input pin.
16	P43	$\overline{BATT\text{-}W}$	INPUT	Battery voltage reduction input pin. When power supply voltage is less than standard, "L" is input. (Voltage standard) rechargeable battery: 5.5 V alkaline battery: 4.6 V
17	P42	$\overline{BATT\text{-}E}$		Normal operation: Battery down signal input pin. When this pin goes "L", it detects running out of the battery. Service mode: This input pin switches the operation mode on the set. Goes from normal mode to service mode when RESET inputs is supplied at "L".

NG → STOP

NG → STOP

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3	P31	CLOCK	OUTPUT	When fowarding the serial data to CXD1130Q (IC601) and CXA1082AQ (IC502), CLOCK signal is input.
4	P30	LATCH	OUTPUT	When forwarding the serial data to CXD1130Q (IC601) and CXA1082AQ (IC502), LATCH signal is output.
5	P03/SI	SUB-Q	INPUT	Serial I/O data input pin. SUB-Q signal (information about the music address and emphasis, etc.) is input from CXD1130Q (IC601).
6	P02/SO	–	–	Not used.
7	P01/$\overline{SCK}$	SQCK	OUTPUT	Serial I/O shift-clock output to CXD1130Q (IC601) and SUB-Q signal is forwarded to the micro-conputer in CXD1130Q (IC601) by the rising (_┌) of shift-clock.
8	P63	MUTE	OUTPUT	Muting signal output pin.CXD1130Q (IC601), LINE output and HEADPHONE output are muted mode at "H".
9	P62	PEN	OUTPUT	Emphasis switching output pin of analog circuit. This pin outputs due to an emphasis signal in SUB-Q signal and switches the analog circuit. The circuit set about de-emphasis at "H".
10	P61	$\overline{PCON}$	OUTPUT	This output pin controls power ON/OFF. "L: Power ON "H": Power OFF
11	P60	$\overline{REM}$	INPUT	REM switch (S809) input pin.
12	P53	SENSE	INPUT	Input pin of SENSE output of CXD1130Q (IC601) and CXA1082AQ (IC502). When forwarding serial data to CXA1082AQ, the signal which monitors the mode of the specified servo circuit is input.
13	P52	$\overline{S\text{-}OPEN}$	INPUT	OPEN/CLOSE switch (S802) input pin. When this pin inputs "L", detects that the upper panel is open.
14	P51	$\overline{P\text{-}MODE}$	INPUT	PLAY MODE switch (S808) input pin.
15	P50	$\overline{K\text{-}MODE}$	INPUT	KEY MODE (AMS/SEARCH) switch (S807) input pin.
16	P43	$\overline{BATT\text{-}W}$	INPUT	Battery voltage reduction input pin. When power supply voltage is less than standard, "L" is input. (Voltage standard) rechargeable battery: 5.5 V alkaline battery: 4.6 V
17	P42	$\overline{BATT\text{-}E}$		Normal operation: Battery down signal input pin. When this pin goes "L", it detects running out of the battery. Service mode: This input pin switches the operation mode on the set. Goes from normal mode to service mode when RESET inputs is supplied at "L".

Pin No.	Port Name	Signal Name	I/O	Function
18	P41	GFS	INPUT	Input pin of Guarded Frame Sync of CXD1130Q (IC601). "H" is input when CXD1130Q reads the data of disc correctly.
19	P40	FOK	INPUT	Focus servo permission pin. This pin detects the focus at "H".
20	X2	–	–	Not used.
21	X1	–	–	Connected to the ground pin.
22	VSS	VSS	–	Ground pin.
23 | 25	V_{LC3} | V_{LC1}	VLC3 | VLC1	–	Power supply pin for LCD bias.
26	VDD	VDD	–	Power supply pin.
27 | 30	COM3 | COM0	COM3 | COM1	OUTPUT	Common output pin (4 partition display).
31 | 39	S23 | S15	S23 | S15	–	Not used.
40 | 54	S14 | S0	S14 | S0	OUTPUT	Segment output pin.
55	INT1	INT1	INPUT	SCOR (sync signal with SUB-Q) is input from CXD1130Q (IC601) and detects the tip of SUB-Q signal by detecting rise (┘└) of input.
56	RESET	RST	INPUT	External reset signal input pin. This set is reset at "H".
57	CL1	CL1	INPUT	Input pin of clock oscillator circuit.
58	VDD	VDD	–	Power supply pin.
59	CL2	CL2	OUTPUT	Output pin of clock oscillator circuit.
60	P13	$\overline{FR}$	INPUT	⏮ switch (S806) input pin.
61	P12	$\overline{FF}$	INPUT	⏭ switch (S805) input pin.
62	P11	$\overline{STOP}$	INPUT	■ switch (S803) input pin. This set is set to the STOP mode by detecting fall (┐└) of input.
63	P10/INT0	$\overline{PB/PAUSE}$	INPUT	⏯ switch (S804) input pin.
64	P33	$\overline{RESET}$	OUTPUT	Reset signal to CXD1130Q (IC601) and CXA1082AQ (IC502) output pin. Each IC is reset by outputting "L".

SECTION 2
ELECTRICAL ADJUSTMENTS

CD PLAYER ELECTRICAL ADJUSTMENTS

Notes on Adjustment

1. Perform adjustments except for RECHARGEABLE VOLTAGE ADJUSTMENT in service mode. Be sure to release service mode after completing adjustment.
   (Refer to "Service Mode (service program)" on Page 6~8.)
2. Perform adjustments in the order given.
3. Use YEDS-18 disc (part No.: 3-702-101-01) unless otherwise indicated.
4. Power supply voltage: DC 9 V
   HOLD switch: OFF

PREPARATION

Put the set into service mode (See page 6~8.) and perform the following checks. Repair if there are any abnormalities.

- **Sled Motor Check**

1. Press the OPEN button and open the top panel.
2. Press the ▶▶| , |◀◀ keys and make sure that the UPF moves smoothly, without catching, from the inmost → outmost → inmost circumference.
   ▶▶| : UPF moves outward
   |◀◀ : UPF moves inward

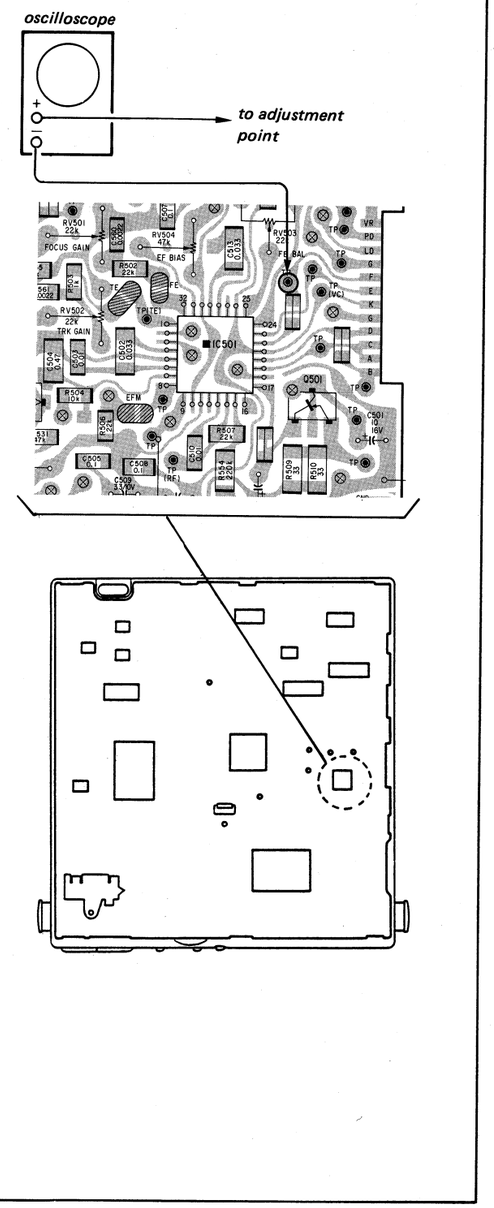
- **Focus Search Check**

1. Press the OPEN button and open the top panel.
2. Press the ▶II key. (Focus search is performed continuously.)
3. Observe the UPF objective lens and check that it moves smoothly up and down with no catching or noises.
4. Press the ■ key.
   Check that focus search operation stops. If it does not, press the ■ key again.

VC (1/2 Vcc) Connecting Point

SKEW ADJUSTMENT
FOCUS BIAS ADJUSTMENT
TRACKING BALANCE ADJUSTMENT
TRACKING GAIN ADJUSTMENT

When the adjustments above are performed, connect the ⊖ side of oscilloscope to the point below.

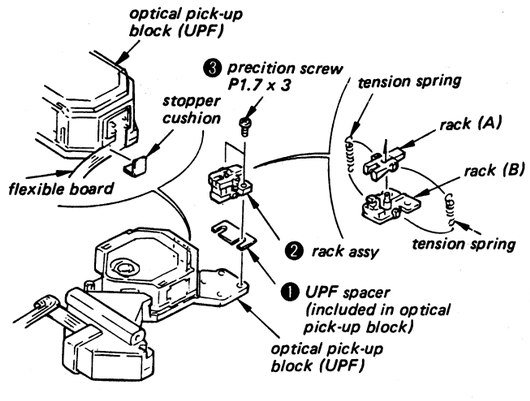


Skew Adjustment

- This adjustment should be performed when replacing UPF.
- UPF spacers are supplied with UPF.
  There are 4 kinds of spacers as listed below in UPF spacers.

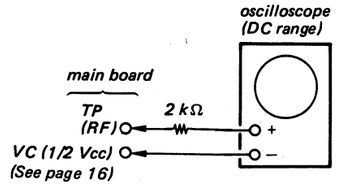
color	thickness t (mm)
yellow	0.1
black	0.188
green	0.25
white	0.35

OPTICAL PICK-UP BLOCK (UPF)



Conditions:
The set should be placed either horizontally.

Adjustment Procedure:

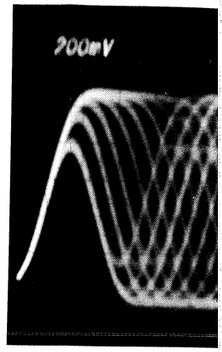


1. Put the set into service mode (see page 6~8)
2. Unplug the external power supply and replace UPF. At this time, use t = 0.1 mm UPF spacer.
3. Connect the oscilloscope to servo board test point TP (RF) and connect power supply.
4. Press the ▶▶| and |◀◀ keys to move the UPF to the center. (Move the UPF to the music area on the disc to enable easy visibility of the eye pattern).
5. Insert the disc (YEDS-18) and close the top panel.
6. Press the ▶II key.
   (It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.)
7. Press the KEY-MODE button. (Tracking and sled go ON.)
8. Confirm the eye pattern of the oscilloscope.
9. Confirm the eye pattern similarly when replacing UPF spacer with t = 0.188 mm, t = 0.25 mm, and t = 0.35 mm.
10. Unplug the external power supply and install UPF spacer which makes the clearest eye pattern. A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.

11. After adjustmer
    6~8)

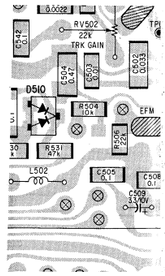
- RF Signal Referenc

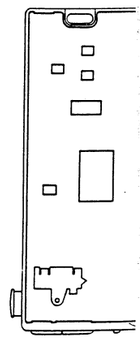
VOLT/
TIME/



When observing
scope for AC rang

Adjustment Location



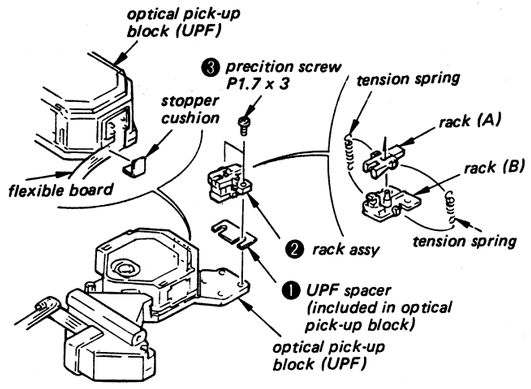


Skew Adjustment

- This adjustment should be performed when replacing UPF.
- UPF spacers are supplied with UPF.
  There are 4 kinds of spacers as listed below in UPF spacers.

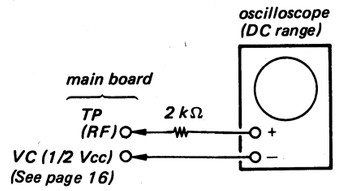
color	thickness t (mm)
yellow	0.1
black	0.188
green	0.25
white	0.35

OPTICAL PICK-UP BLOCK (UPF)



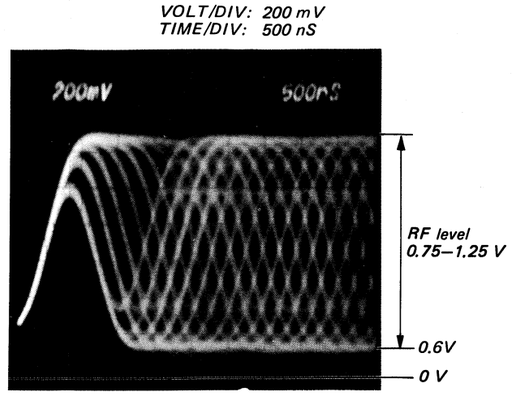
Conditions:
The set should be placed either horizontally.

Adjustment Procedure:



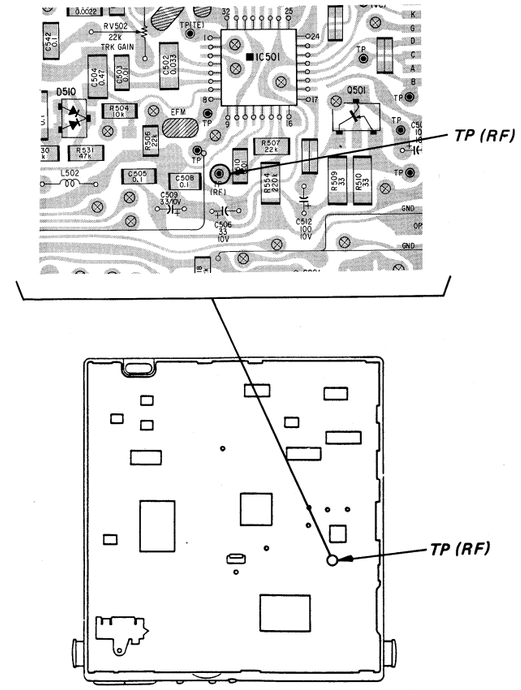
1. Put the set into service mode (see page 6~8)
2. Unplug the external power supply and replace UPF. At this time, use t = 0.1 mm UPF spacer.
3. Connect the oscilloscope to servo board test point TP (RF) and connect power supply.
4. Press the ▶▶ and ◀◀ keys to move the UPF to the center. (Move the UPF to the music area on the disc to enable easy visibility of the eye pattern).
5. Insert the disc (YEDS-18) and close the top panel.
6. Press the ▶II key.
   (It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.)
7. Press the KEY-MODE button. (Tracking and sled go ON.)
8. Confirm the eye pattern of the oscilloscope.
9. Confirm the eye pattern similarly when replacing UPF spacer with t = 0.188 mm, t = 0.25 mm, and t = 0.35 mm.
10. Unplug the external power supply and install UPF spacer which makes the clearest eye pattern. A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.
11. After adjustment, release service mode (see page 6~8)

- RF Signal Reference Waveform (eye pattern)



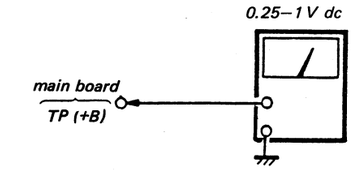
When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

Adjustment Location: main board

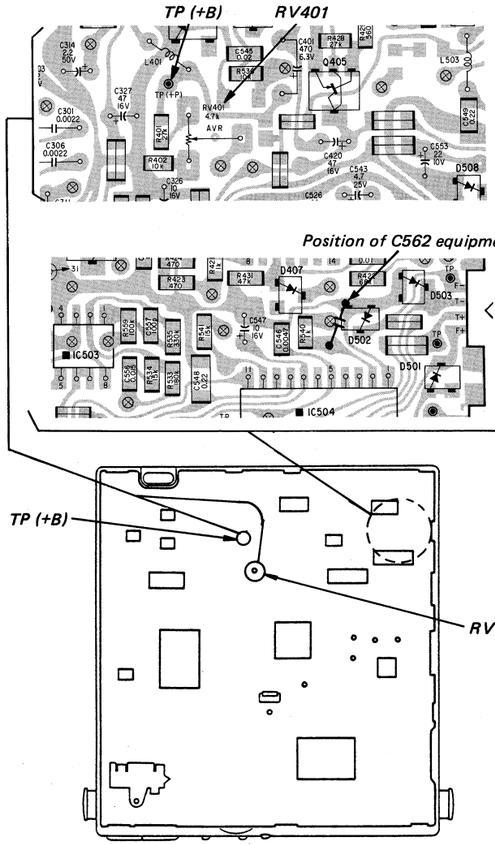


+B Voltage Adjustment

Adjustment Procedure:

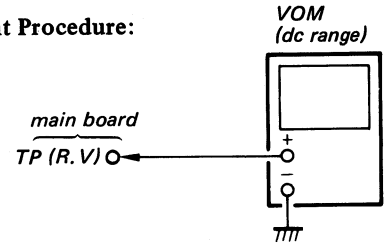


1. Put the set into service mode (see page 6~8)
2. Connect the VOM to main board test point TP (+B).
3. Adjust RV401 for the standard voltage reading on the VOM.
   There are two kinds of the standard voltage for +B adjustment according to the parts equipment.
   - Distinction
     C562 equipped: 4.67 to 4.73V
     C562 not equipped: 4.65 to 4.7V
4. After adjustment, release service mode (see page 6~8.)



Rechargeable Voltage Adjustment

Adjustment Procedure:

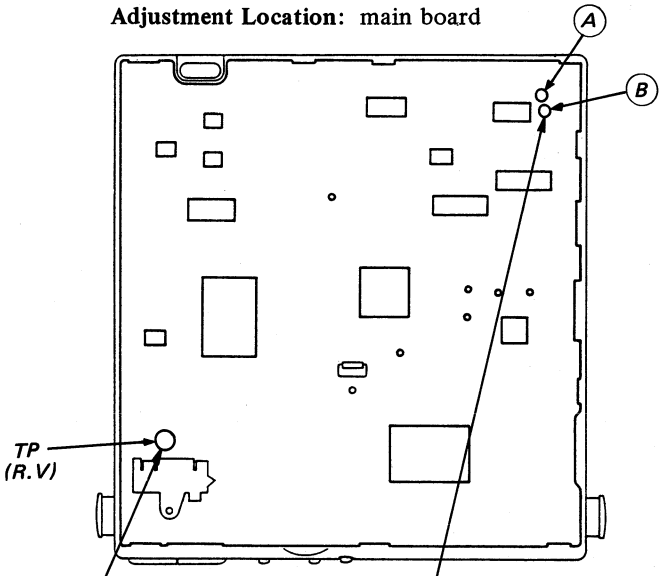


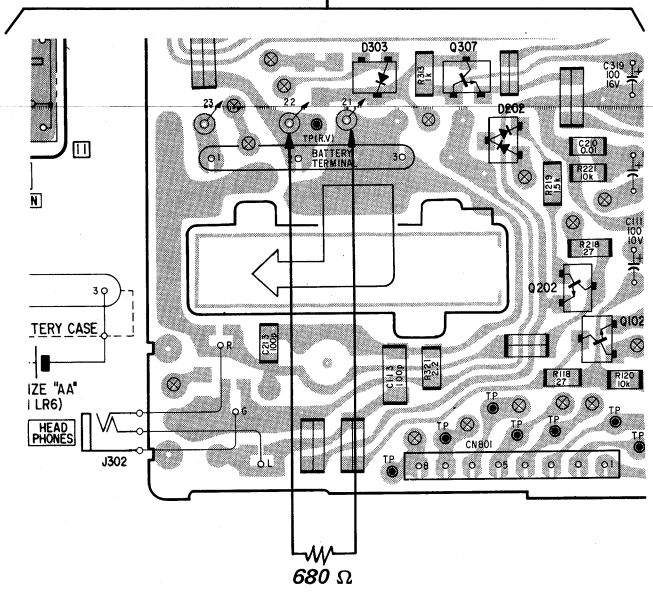
1. Connect the VOM to main board test point TP (R.V.)
2. Short between the Q404 base and GND. Connect a 680 Ω resistor between pin 2 and pin 3 of BATTERY TERMINAL as shown below.
3. Apply DC 9 V with requrated dc power supply from external power jack CNJ401.
4. Adjust the pattern connection (Ⓐ or Ⓑ) to obtain 7.25 to 7.47 V reading on the VOM.

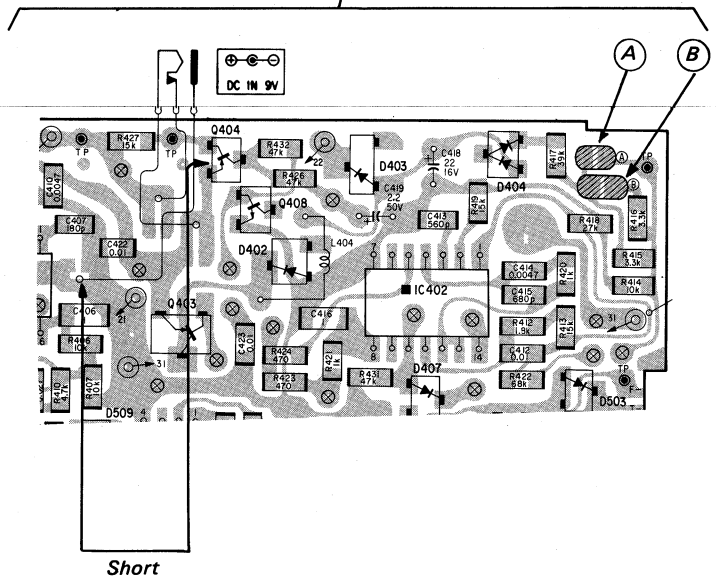
pattern connection		VOM reading
Ⓐ	Ⓑ	
O	O or X	down
X	O	↕
X	X	up

O: short X: open

Adjustment Location: main board



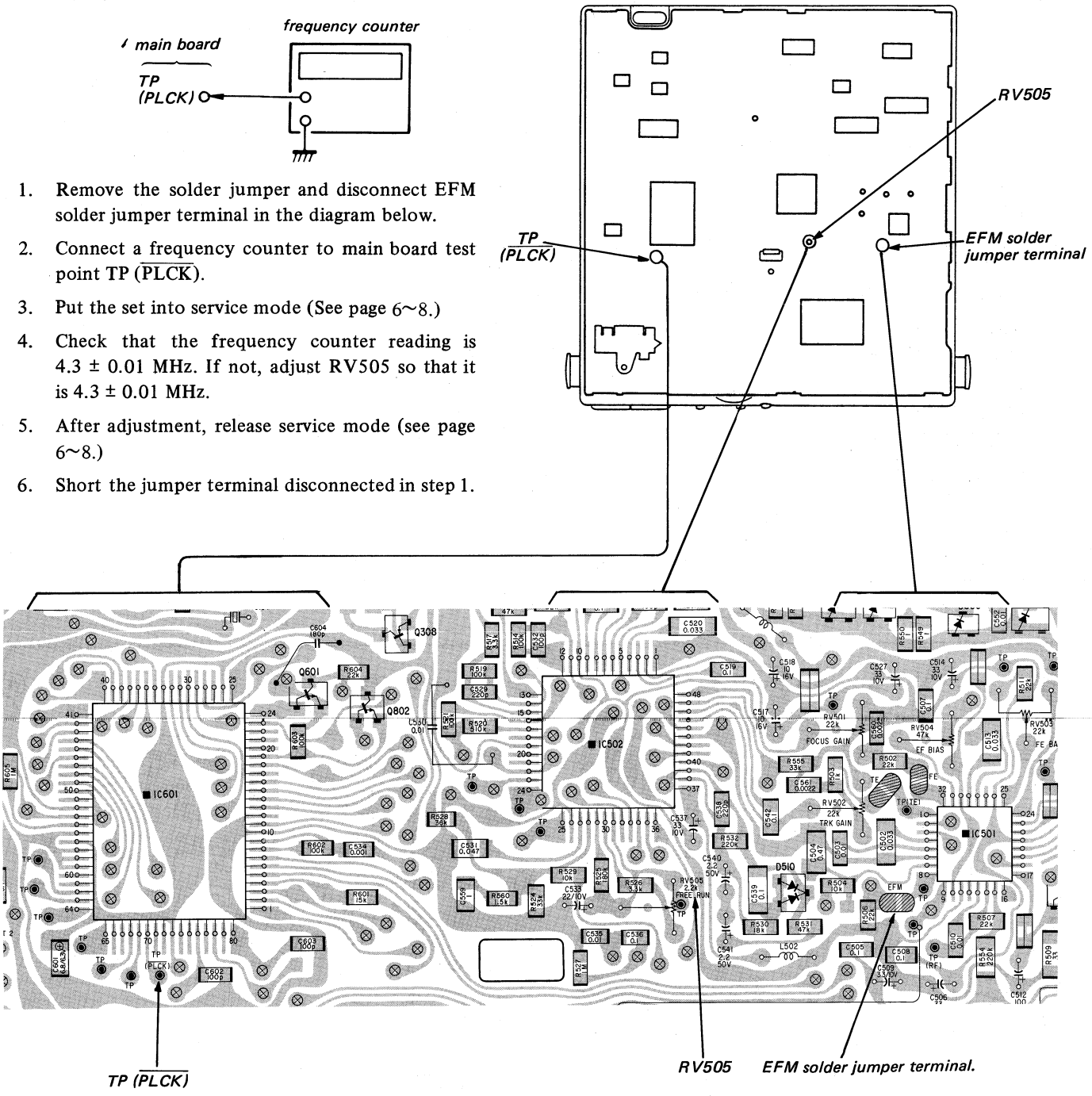




PLL Free Run Frequency Check and Adjustment

Check/Adjustment Procedure:

1. Remove the solder jumper and disconnect EFM solder jumper terminal in the diagram below.
2. Connect a frequency counter to main board test point TP ($\overline{\text{PLCK}}$).
3. Put the set into service mode (See page 6~8.)
4. Check that the frequency counter reading is 4.3 ± 0.01 MHz. If not, adjust RV505 so that it is 4.3 ± 0.01 MHz.
5. After adjustment, release service mode (see page 6~8.)
6. Short the jumper terminal disconnected in step 1.

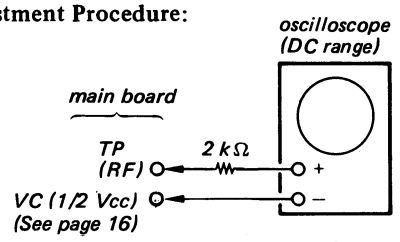


Focus Bias Adjustment

Conditions:

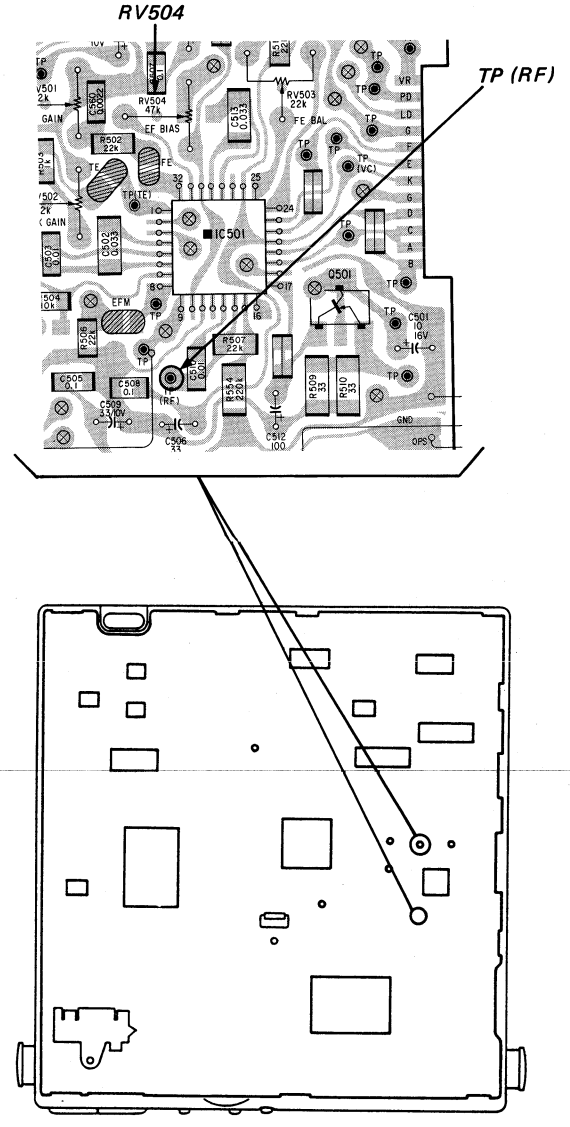
The set should be placed either horizontally.

Adjustment Procedure:



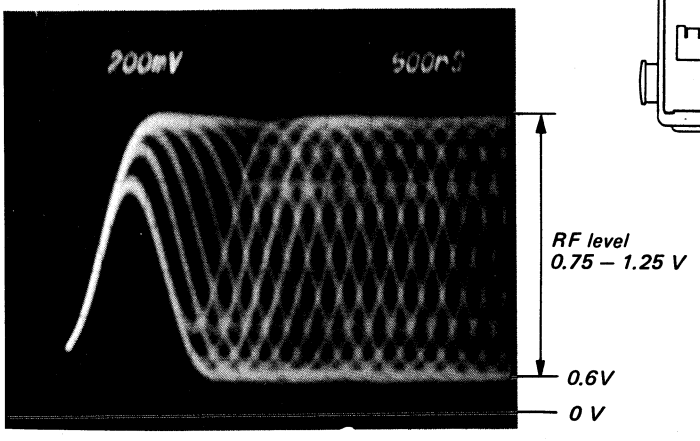
1. Put the set into service mode (See page 6~8.)
2. Connect the oscilloscope to servo board test point TP (RF).
3. Press the ▶▶| and |◀◀ keys to move the UPF to the center. (Move the UPF to the music area on the disc to enable easy visibility of the eye pattern).
4. Insert the disc (YEDS-18) and close the top panel.
5. Press the ▶II key.
   (It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.)
6. Press the KEY-MODE button. (Tracking and sled go ON.)
7. Adjust RV504 so that the oscilloscope waveform eye pattern is good. A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.
8. Unplug the external power supply to stop spindle motor from rotating.
9. After adjustment, release service mode (see page 6~8.)

Adjustment Location: main board



- **RF Signal Reference Waveform (eye pattern)**

VOLT/DIV: 200 mV
TIME/DIV: 500 nS



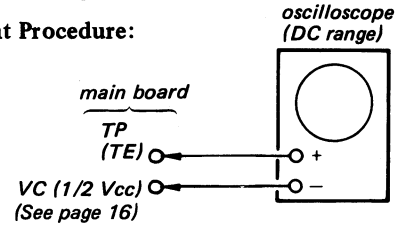
When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

Tracking Balance Adjustment

Conditions:

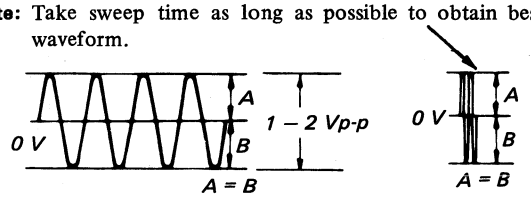
The set should be placed either horizontally.

Adjustment Procedure:



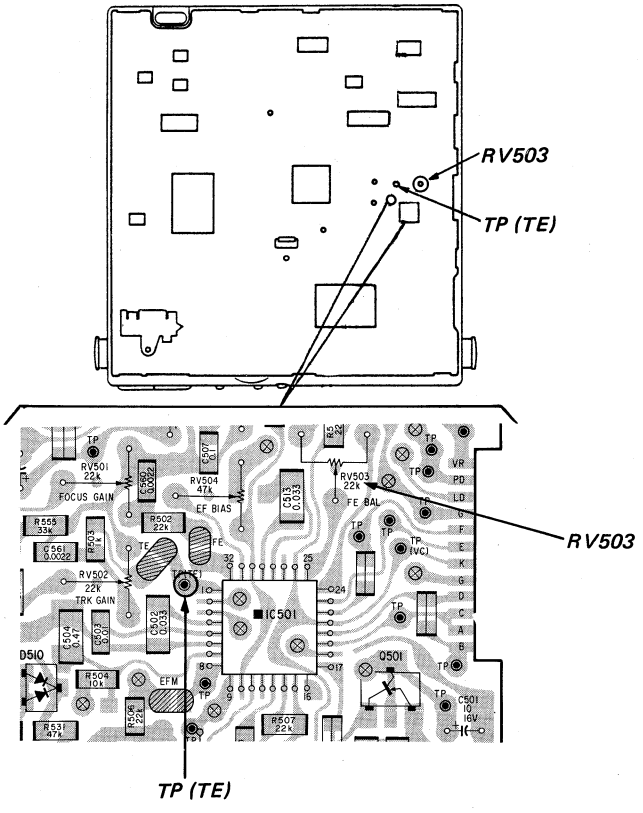
1. Connect the oscilloscope to main board TP (TE).
2. Put the set into service mode (See page 6~8.)
3. Press the ▶▶| and |◀◀ keys to move the UPF to the center.
4. Insert the disc (YEDS-18) and close the top panel.
5. Press the ▶II key.
   (It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.)
6. Adjust RV503 so that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0 V.

Note: Take sweep time as long as possible to obtain best waveform.



7. Unplug the external power supply to stop spindle motor from rotating.
8. After adjustment, release service mode (see page 6~8.)

Adjustment Location: main board



Reference

Focus/Tracking Gain Adjustment

A frequency responce analyzer or CD jig is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perfrom this adjustment.

Focus/tracking gain determines the pick-up followup (vertical and horizontal) relative to mechanical noise and metchnical shock when the 2-axis device operate. However, as these reciprocate, the adjustment is at the point where both are satisfied.

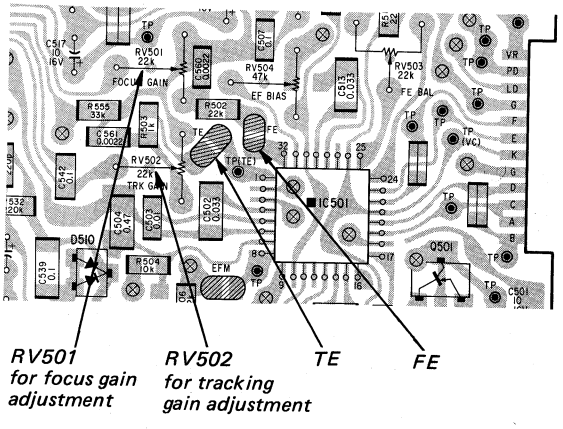
- When gain is high, the noise when the 2-axis device operates increases.
- When gain is low, it is more susceptible to mechanical shock and skipping occurs more easily.

This adjustment is to be performed when replacing the following parts:

- UPF
- RV501 (focus gain volume)
- RV502 (trucking gain volume)

On this set, it is very difficult to simplify this adjustment. For those sets on which symptoms such as "occasional skipping" are hard to discover, or it is hard to tell if the set has been repaired, use the CD jig and perform this adjustment. Refer to the diagram below for connection of the CD jig. The adjustment procedure is described in the separate CD Jig Instruction Manual.

Please be careful no to move RV501 (focus gain volume), RV502 (tracking gain volume) when working on the set.



Remove the solder jumpers at the TE and FE locations and connect the CD jig. (Connect the points on both TE and FE which are closer to IC501 to the output from the CD jig, and the points farther to IC501 to the input from the CD jig.)

RADIO ELECTRICAL ADJUSTMENT

FM Section

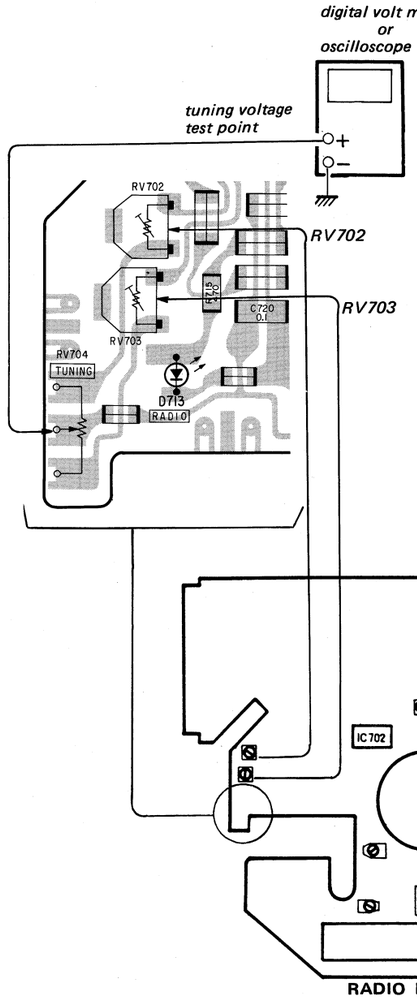
Adjustment Procedure:

- Function switch: RADIO
- Band switch: FM DX

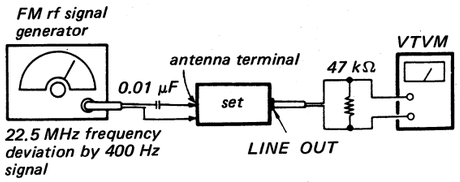
1, Tuning Voltage Adjustment.

- Adjust for a maximum reading on digital volt meter or oscilloscope.

Dial pointer	Volt meter	Adjustment parts
f max.	9 V	RV702
f min.	1 V	RV703



2, FM Frequency Coverage Adjustment.



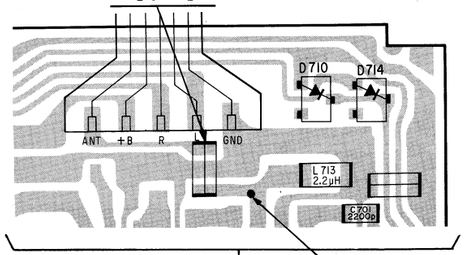
- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.
- Adjust for a maximum reading on VTVM

Dial pointer	SG frequency	Adjustment parts
f max	109.5 MHz (107.8 MHz) [108.25 MHz]	CT701
f min	85.5 MHz (87.35 MHz) [87.35 MHz]	L702

: EXCEPT FOR AE5, AE6, ITALY
( ) : AE5, AE6
[ ] : ITALY

Adjustment Location: RADIO BOARD

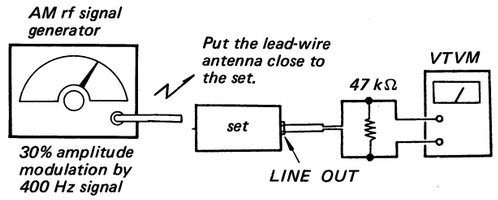
- Remove chip jumper for adjustments.
  Solder chip jumper after adjustments.



AM Section

Adjustment Procedure:

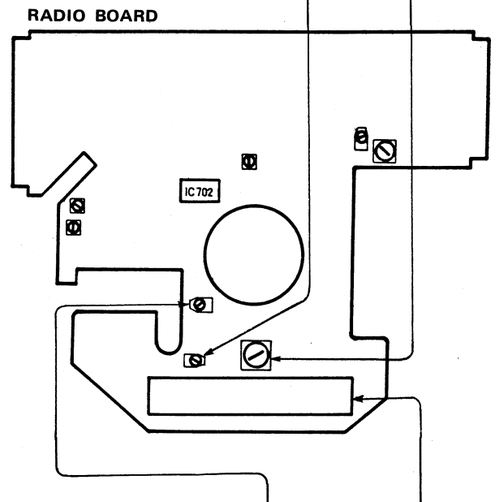
- Function switch: RADIO
- Band switch: AM



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

Adjustment & Location: RADIO BOARD

AM FREQUENCY COVERAGE ADJUSTMENT		
Adjust for a maximum reading of VTVM		
Dial Pointer	f max.	f min.
SG Frequency [ ]: ITALY MODEL	1,680 KHz [1,631.5 KHz]	515 KHz [516.5 KHz]
Adjustment Parts	CT703	T702

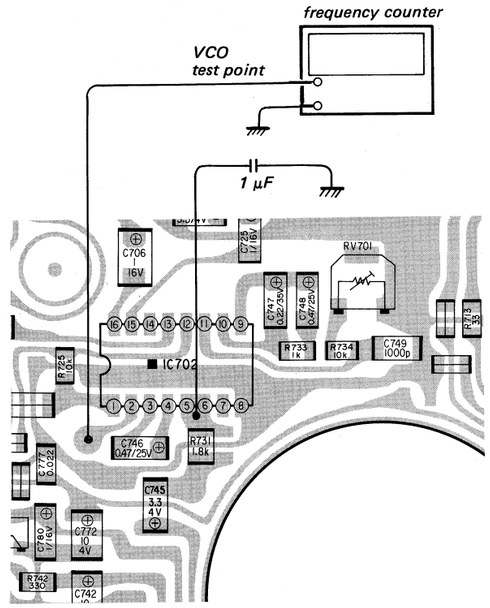


Adjustment Parts	CT704	L711
SG Frequency	1,400 KHz	620 kHz
Adjustment for a maximum reading on VTVM		
AM TRACKING ADJUSTMENT		

VCO ADJUSTMENT

Adjustment Procedure

1. Connect a 1 μF capacitor as follows.
2. Adjust RV701 for 19 ±0.02 kHz on the frequency counter.
3. Remove the capacitor connected in step 1.



t.

VTVM

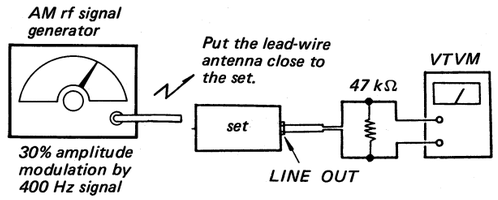
nt parts
01
2

TALY

AM Section

Adjustment Procedure:

- Function switch: RADIO
- Band switch: AM

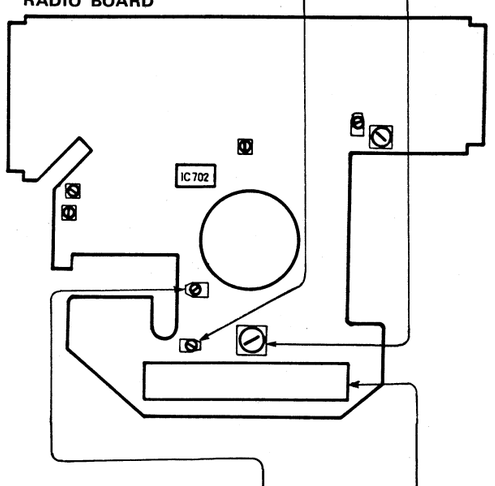


- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

Adjustment & Location: RADIO BOARD

AM FREQUENCY COVERAGE ADJUSTMENT		
Adjust for a maximum reading of VTVM		
Dial Pointer	f max.	f min.
SG Frequency [ ]: ITALY MODEL	1,680 KHz [1,631.5 KHz]	515 KHz [516.5 KHz]
Adjustment Parts	CT703	T702

RADIO BOARD

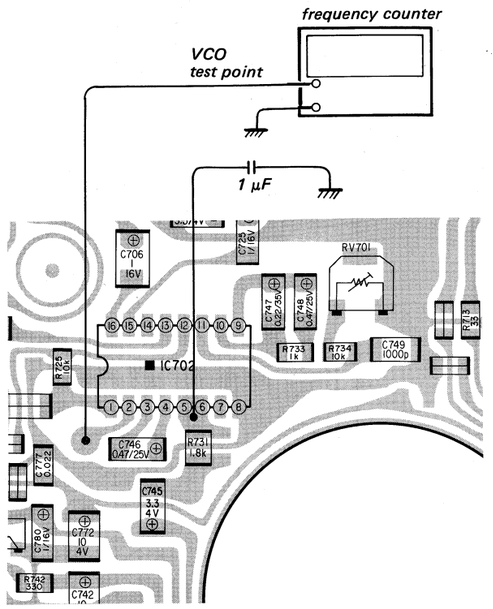


Adjustment Parts	CT704	L711
SG Frequency	1,400 KHz	620 kHz
Adjustment for a maximum reading on VTVM		
AM TRACKING ADJUSTMENT		

VCO ADJUSTMENT

Adjustment Procedure

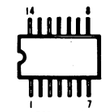
1. Connect a 1 μF capacitor as follows.
2. Adjust RV701 for 19 ±0.02 kHz on the frequency counter.
3. Remove the capacitor connected in step 1.



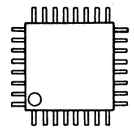
SECTION 3
DIAGRAMS

3-1. SEMICONDUCTOR LEAD LAYOUTS

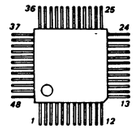
BA9700F
CX10054



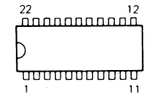
CXA1081Q



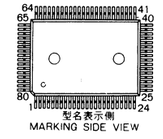
CXA1082Q



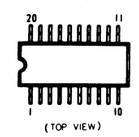
CXA1083M



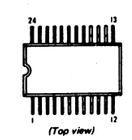
CXD1130Q



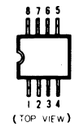
CXD1140M



HM6116LFP-3

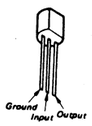


M5201FP
M5218FP
NJM2903M
μPC358G2

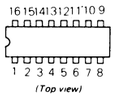


M5216P

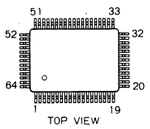
S-81250HG



TL1451ACNS

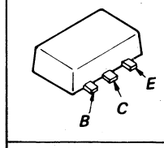


μPD7503G-648-12

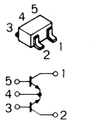


2SA812
2SB624-BV4
2SC1623
2SC1623-7L
2SC2223
2SD596
DTA114YK
DTA124EK
DTC114TK
DTC144TK
DTC124EK

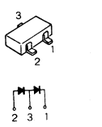
2SB1120
2SB798
2SD1664-Q



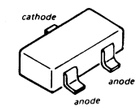
FMW1



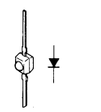
1SS123



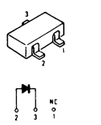
1S2837
SVC203CP



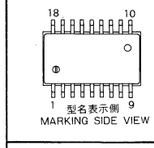
SLM-13VM



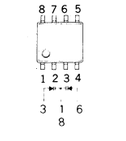
RD2.7M-B2
RD5.6M-B1
RD10M-B2
SB01-05CP
SB05-05CP
SB10-05CP



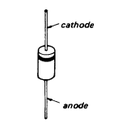
CX10053B



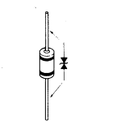
KV1260M



RD3.3EL2
RD5.6M-B2



RD9.1EW

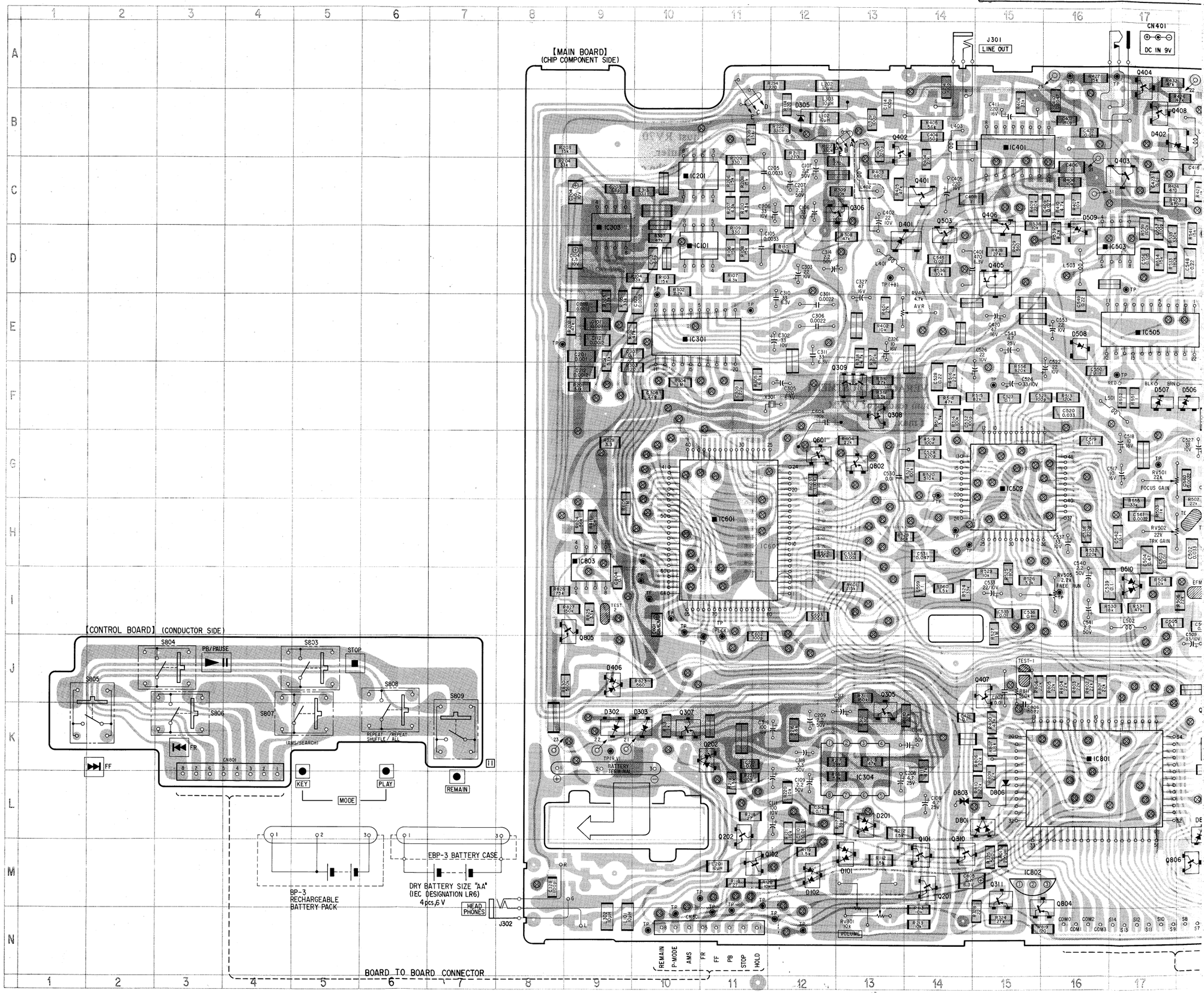


3-2. MOUNTING DIAGRAM

●SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
IC101	D-10	D101	M-12
IC201	C-10	D102	M-12
IC301	E-10	D201	L-13
IC303	C-9	D202	K-10
IC304	L-13	D303	K-9
		D305	B-12
IC401	B-15		
IC402	B-18	D401	D-13
IC501	H-18	D402	B-17
IC502	G-15	D403	A-18
IC503	D-16	D404	A-19
		D405	K-19
IC504	D-19		
IC505	E-17	D406	J-9
IC601	H-11	D407	C-18
IC602	H-12	D501	D-20
IC801	K-16	D502	C-19
		D503	C-20
IC802	M-15		
IC803	H-9	D504	F-19
		D505	F-18
Q101	M-14	D506	F-17
Q102	M-11	D507	F-17
Q201	M-14	D508	E-16
Q202	L-11		
Q301	N-19	D509	C-16
Q302	M-19	D510	I-17
		D801	L-14
Q304	M-19	D802	L-18
Q305	J-13	D803	L-14
Q306	C-12		
Q307	K-10	D804	L-19
Q308	F-13	D806	L-15
Q309	F-12		
Q310	M-14		
Q311	M-15		
Q401	C-14		
Q402	B-13		
Q403	C-16		
Q404	A-17		
Q405	D-15		
Q406	C-15		
Q407	J-14		
Q408	B-17		
Q501	I-19		
Q503	C-14		
Q601	G-12		
Q801	K-18		
Q802	G-13		
Q803	K-19		
Q804	M-15		
Q805	I-9		
Q806	M-18		
Q807	M-18		

- ○—— : parts extracted from the component side.
- ■ : part mounted on the conductor side.
- ⬚ : indicates side identified with part number.
- ▲ : nonflammable resistor.
- ⊗ : Through hole.



【MAIN BOARD】
(CHIP COMPONENT SIDE)

J301
LINE OUT

CN401
DC IN 9V

【2-AXIS DEVICE FLEXIBLE BOARD】

【RADIO FLEXIBLE BOARD】
TO RADIO BOARD

【MECHANISM DECK】

UPF
KSS 160A
OPTIC PICK UP

M901
SLED MOTOR

S801
LIMIT SWITCH
TURN ON WHEN UPF REACHES MOST INNER POSITION

M902
SPINDLE MOTOR

MD COVER

【SERVO FLEXIBLE BOARD】

【LEAF SWITCH BOARD】
(CONDUCTOR SIDE)

S802
OPEN SWITCH
TURN ON WHEN UPPER PANEL IS SHUT.

S401
FUNCTION SELECTOR
RADIO
CD HOLD
RADIO OFF
CD

LCD1 LCD MODULE

BATT REMAIN REPEAT ALL SHUFFLE
-88 -88:88 SEARCH AMS

S0 S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 COM1 COM2 COM3 COM4

STOP
S808
S809
REPEAT SHUFFLE / REPEAT ALL
PLAY
REMAIN
MODE

EBP-3 BATTERY CASE
DRY BATTERY SIZE "AA"
(IEC DESIGNATION LR6)
4pcs,6 V

HEAD PHONES
J302

BOARD TO BOARD CONNECTOR

REMAIN P-MODE AMS FR FF PB STOP HOLD

IC201 IC303 IC101 IC301 IC601 IC803 IC401 IC402 IC503 IC504 IC505 IC602 IC304 IC801 IC802 IC501

Q404 Q408 Q402 Q403 Q401 Q306 Q503 Q406 Q405 Q309 Q308 Q601 Q802 Q805 Q307 Q305 Q407 Q801 Q803 Q806 Q807 Q804 Q202 Q102 Q101 Q201 Q311 Q310 Q302 Q304 Q303 Q301 Q501 Q502 Q504 Q505 Q506 Q507

D305 D402 D403 D404 D407 D503 D502 D501 D509 D508 D507 D506 D505 D504 D406 D302 D303 D202 D201 D102 D803 D801 D805 D804 D802 D301 D405 D510

RV501 FOCUS GAIN
RV502 TRK GAIN
RV503 EF BAL
RV504 FE BIAS
RV505 FREE RUN
RV301 VOLUME

TP(TE) TP(FE) TP(VC) TP(RF) TP(PLCK) TP(VI) TP(+B)

BATTERY TERMINAL

TEST 1 TEST 3

BLK WHT WHT BLU BLU GND PDS GND

S401 F F+ T- T+ ANT Vcc P L GND

RED BLK BRN VIO BLU BLU BLK RED BLK

CN601

L202 10μH L303 10μH L102 10μH L302 10μH L401 L402 L403 L404 L501 L502 L503

X301

RV401 4.7K AVR

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A B C D E F G H I J

【MAIN BOARD】

UPF KSS-160A OPTIC PICUP(1/2)

【PICKUP FLEXIBLE BOARD】

Short by solder jumper for mute off.

(TURN ON WHEN UPF REACHES MOST INNER POSITION) S801 LIMIT SWITCH

【LEAF SWITCH BOARD】 (TURN ON WHEN UPPER PANEL IS SHUT) S802 OPEN SWITCH

【CONTROL BOARD】

SW803 STOP PB/PAUSE FF FR MODE PLAY CUE REMAIN SW809

CN801 8P

BOARD TO BOARD CONNECTOR

C602 M5M5278-20DS MEMORY

C601 CXD1130Q SIGNAL PROCESSOR

C603 CXD1135Q SERVO AMP

C604 CXA1082AZY LIMIT SWITCH ON:0 OFF:4.2 SERVO AMP

C201 CXD1124AQ D/A CONVERTER

IC101 M5201FP EMPHASIS

IC201 M5201FP EMPHASIS

IC303 M5201FP LOW PASS FILTER

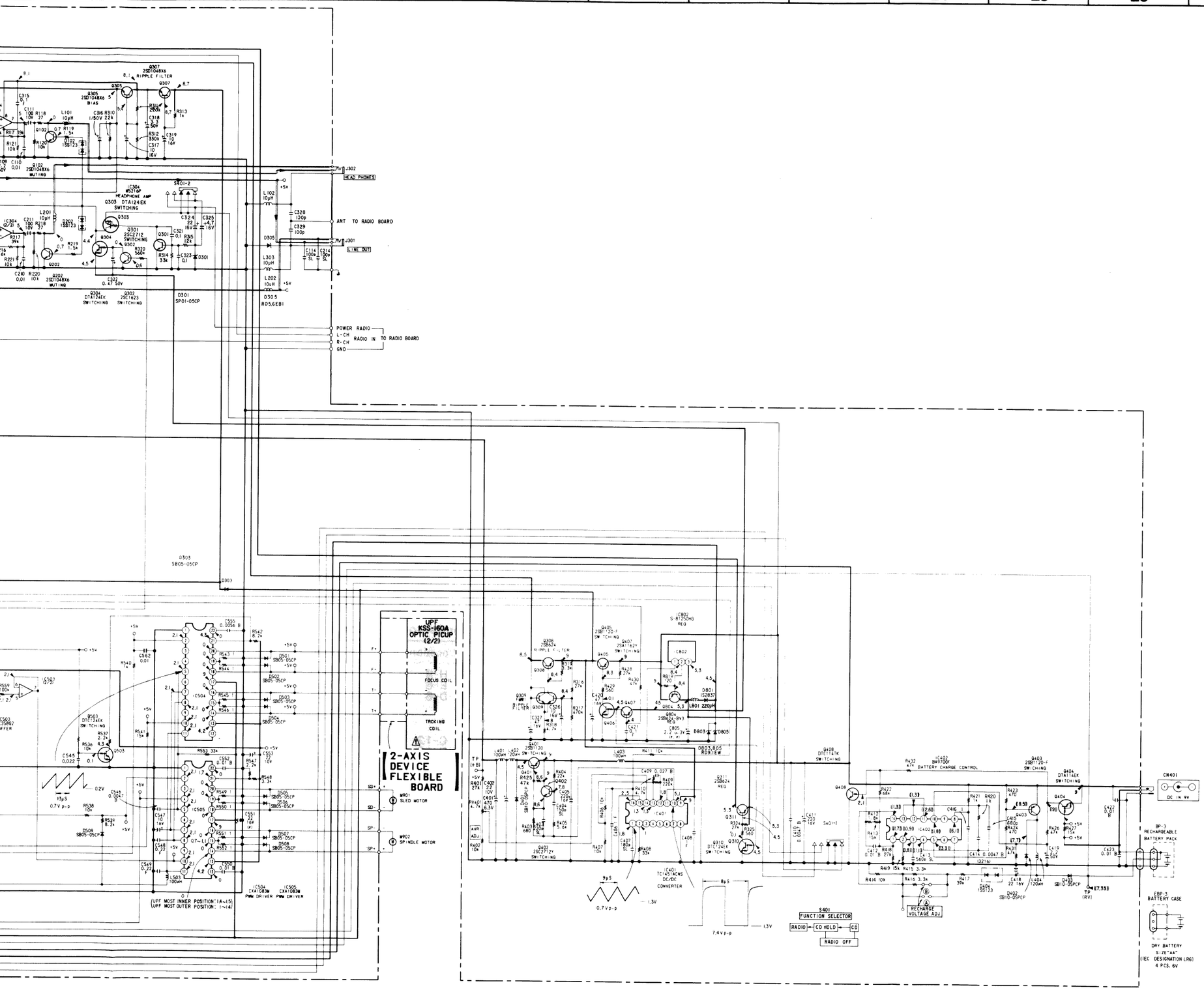
IC304 M5216P HEADPHONE AMP SWITCHING

IC803 POWER DET

IC601 μPC75036-648-12 SYSTEM CONTROL

UPPER PANEL OPEN : 4.3 SHUT : 0

LCD1 LCD MODULE



Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^1/_8$W or less unless otherwise specified.
- ⟶ : signal path.
- ▬ : B+ bus.
- Voltages, waveform and total current are measured with top panel closed.
- Power voltage is DC 9V and fed with regulated dc power supply from DC in 9V (external power voltage) jack.
  Voltages are DC with respect to ground in service mode.
  Voltage variations may be noted due to normal production tolerances.
  no mark : stop mode
  ( ) : play mode
  (( )) : Stop condition on normal operation when connecting a 680 Ω resistor between pin 2 and pin 3 of BATTERY TERMINAL and storing the base or Q412 to the ground.
- Waveforms are taken to ground in service mode by using oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Total current is measured in service mode.
- Switch

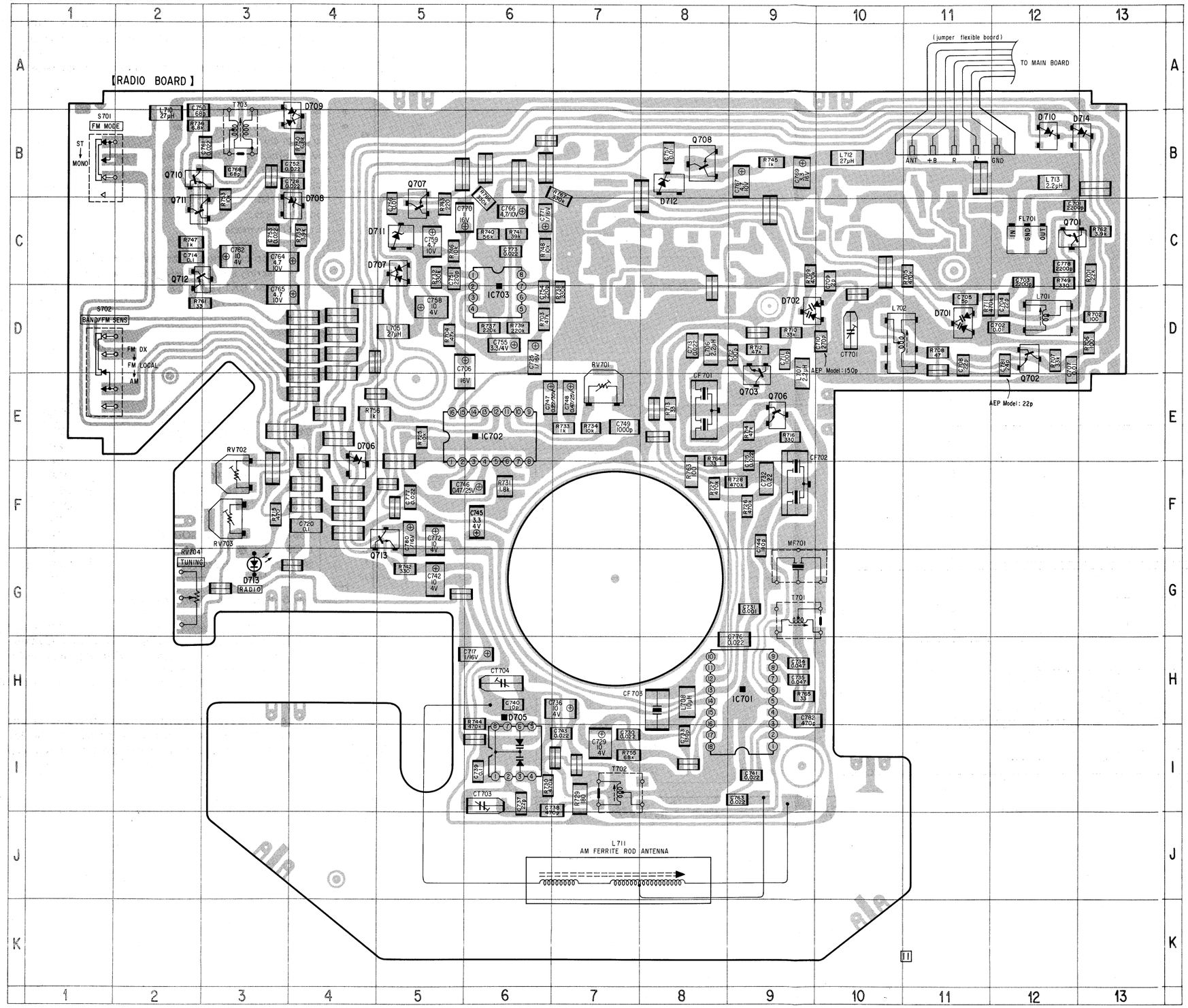
Ref. No.	Switch	Position
S401	FUNCTION Selection	CD
S801	LIMIT	OFF
S802	OPEN	ON
S803	■ (STOP)	OFF
S804	▶II (PB/PAUSE)	OFF
S805	▶▶| (FF)	OFF
S806	|◀◀ (FR)	OFF
S807	● (KEY MODE)	OFF
S808	● (PLAY MODE)	OFF
S809	● (REMAIN)	OFF

See page 6~8 for setup of service mode.

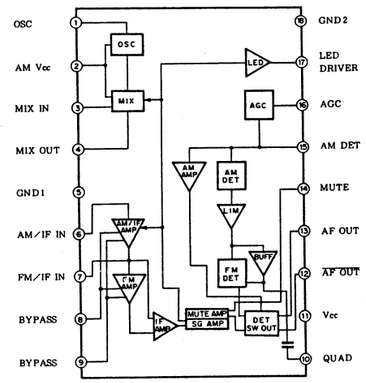
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par un trame et une marque ⚠ sont critiques pour la securité. Ne les remplacer que par une pièce portant le numéro spécifié.

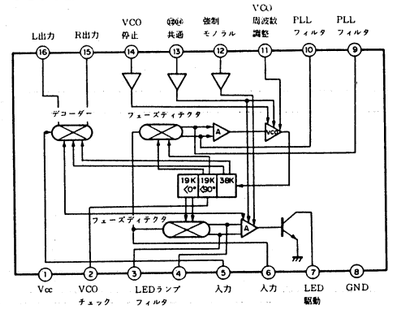
3-4. MOUNTING DIAGRAM



IC701 CX10053B



IC702 CX10054B

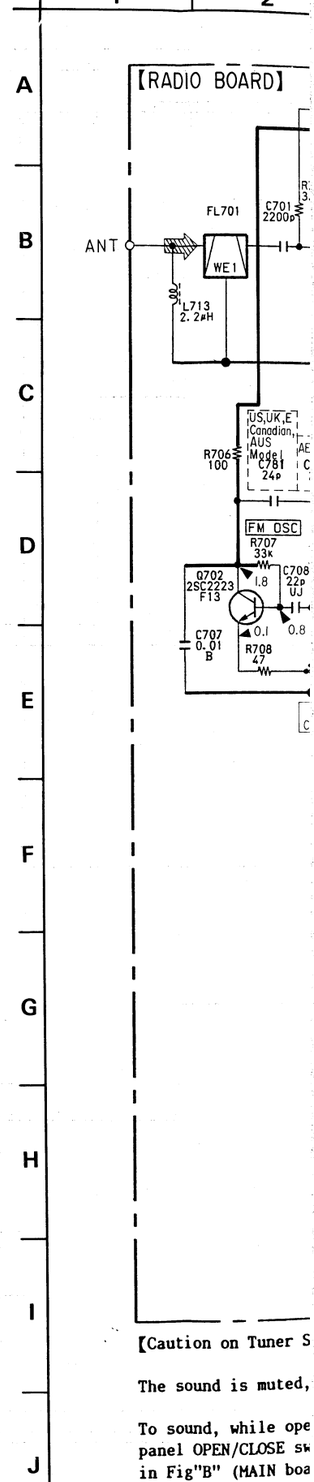


●Semiconductor Location

Ref. No.	Location	Ref. No.	Location
IC701	H-9	D701	D-11
IC702	E-6	D702	D-9
IC703	D-6	D705	I-6
		D706	E-4
		D707	C-5
Q701	C-12	D708	C-4
Q702	D-12	D709	A-4
Q703	E-9	D710	B-12
Q706	E-9	D711	C-5
Q707	B-5	D712	B-8
Q708	B-8	D713	G-3
Q710	B-2	D714	B-12
Q711	C-2		
Q712	C-2		
Q713	F-5		

- ○—— : parts extracted from the component side.
- ■ : part mounted on the conductor side.
- ⊡ : indicates side identified with part number.
- ▲ : nonflammable resistor.

3-5. SCHEMATIC DIAGRAM



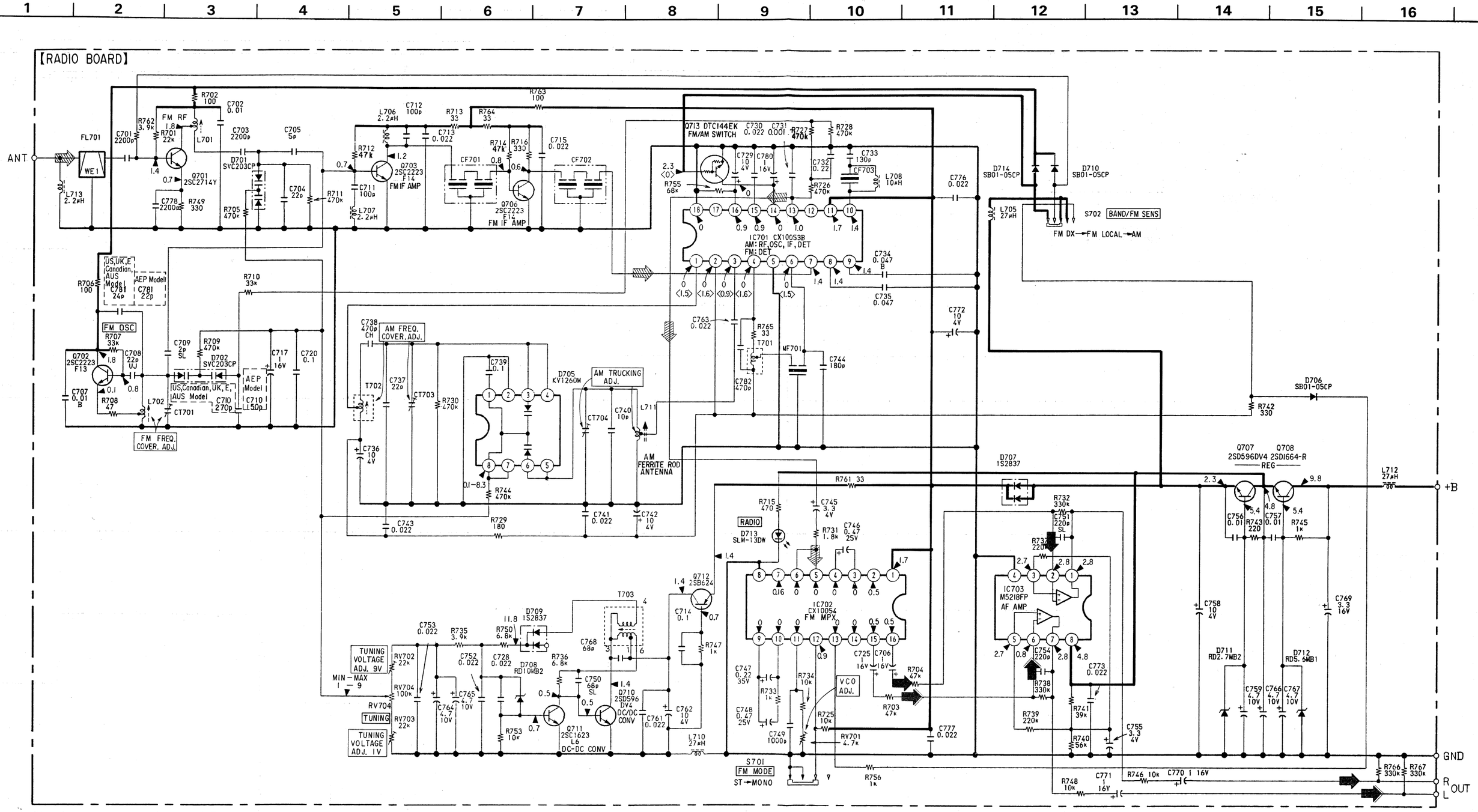
【Caution on Tuner S

The sound is muted,

To sound, while ope
panel OPEN/CLOSE sw
in Fig"B" (MAIN boa

After the repair, c

5. SCHEMATIC DIAGRAM



【Caution on Tuner Section repair】

The sound is muted, when opening upper panel of the unit.

To sound, while opening the upper panel, set S802 (Upper panel OPEN/CLOSE switch) to ON,or short the pattern shown in Fig"B" (MAIN board) by solder. So the mute is released.

After the repair, open the pattern as before.

Note:

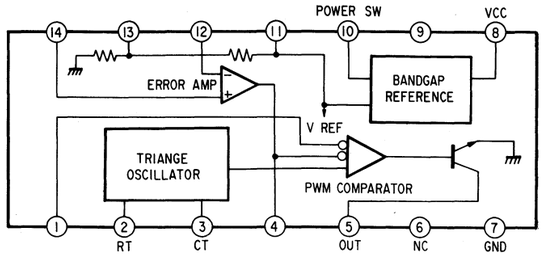
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/10W or less unless otherwise specified.
- Switch

Ref. No.	Switch	Position
S701	FM mode	STEREO
S702	BAND/FM SENS	FM DX

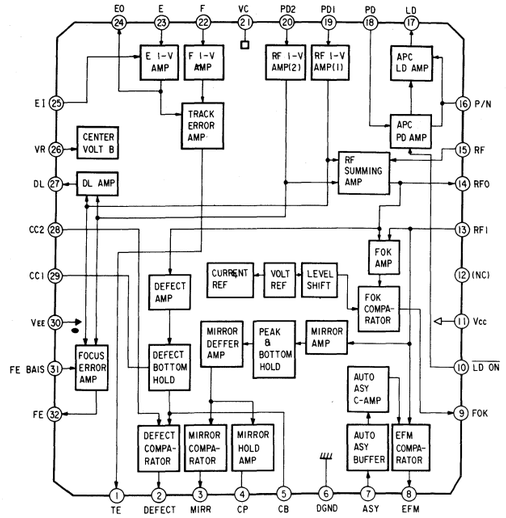
- ▬ : B+ bus.
- ▭ : adjustment for repair.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with a VOM (50 kΩ/V).
  no mark : FM
  < > : AM
- Power voltage is DC 9V and fed with regulated dc power supply from DC in 9V (external power voltage) jack. Voltages are DC with respect to ground in service mode. Voltage variations may be noted due to normal production tolerances.
- signal path
  ⇨: FM signal path
  ➡: FM STEREO R-CH signal path
  ➡: FM STEREO L-CH signal path

3-6. IC BLOCK DIAGRAM

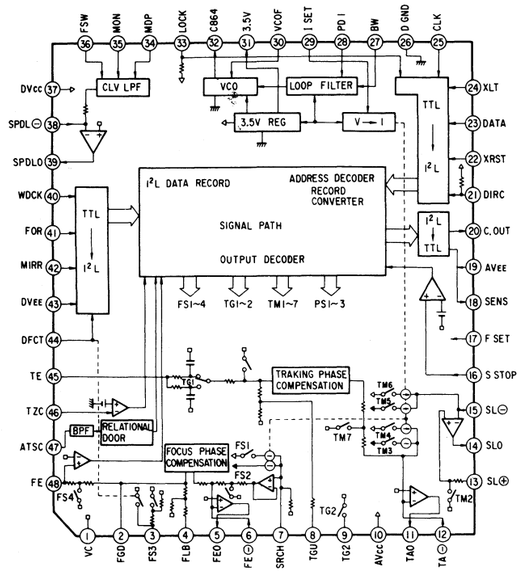
BA 9700F



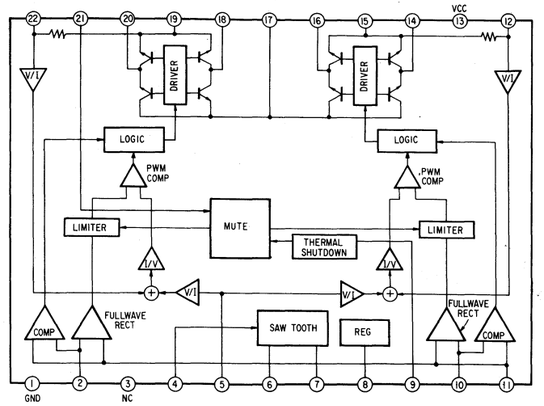
CXA 1081Q



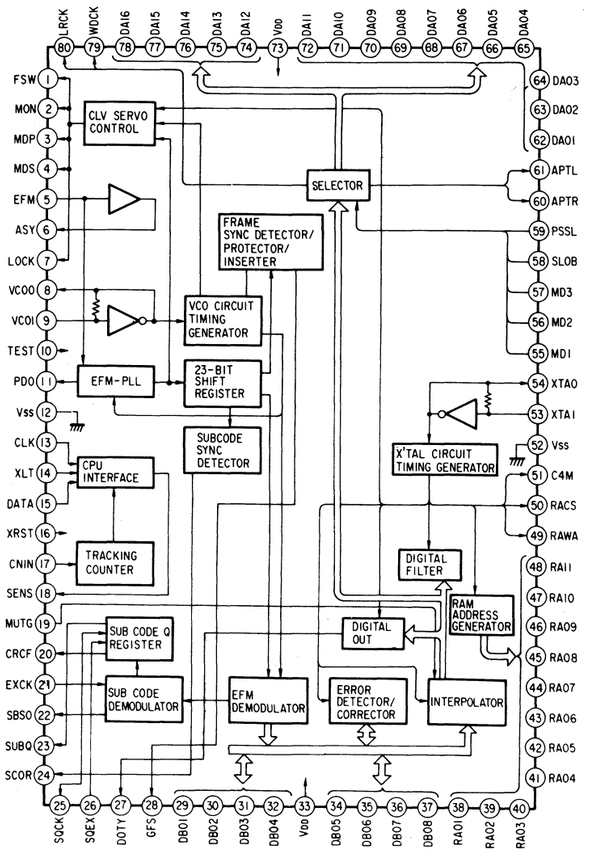
CXA 1082AQ



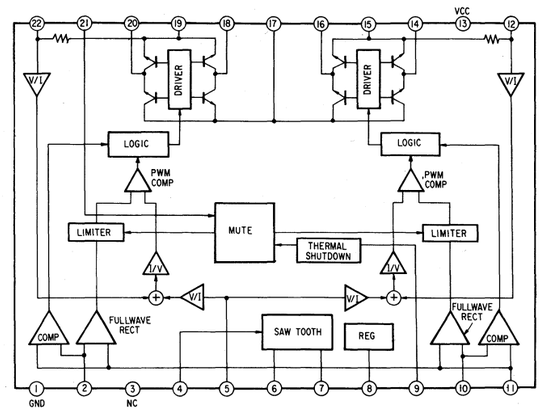
CXA 1083M



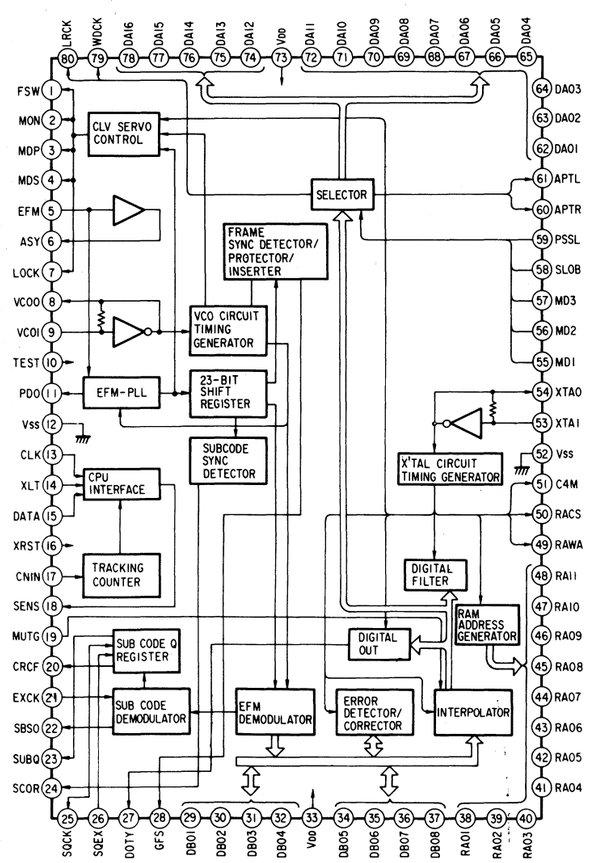
CXD 1130Q



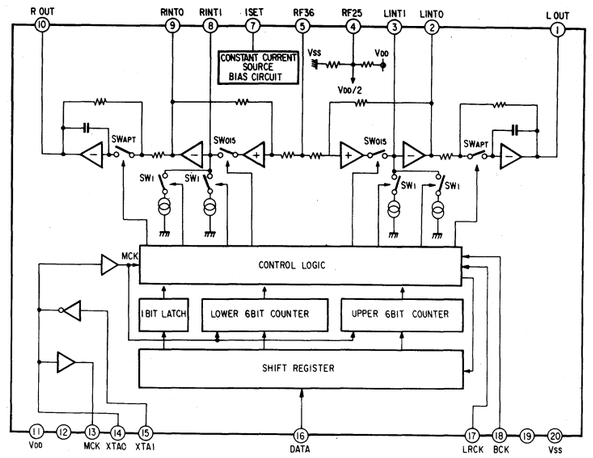
CXA 1083M



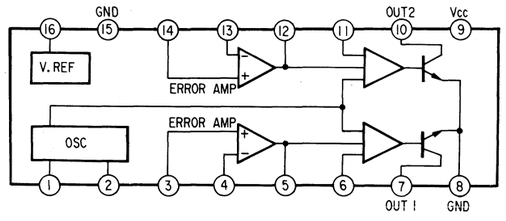
CXD 1130Q



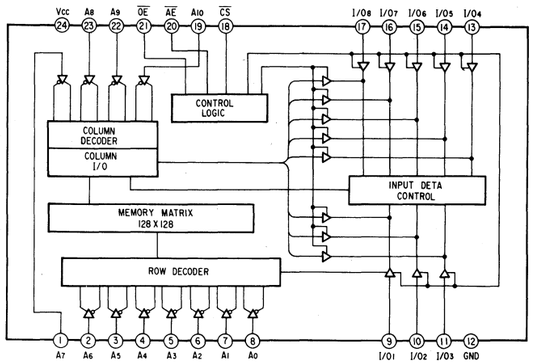
CXD 1140M



TL 145ACNS



HM 6116LFP-3



SECTION 4
EXPLODED VIEWS AND PARTS LIST

NOTE:

The mechanical parts with no reference number in the exploded views are not supplied.

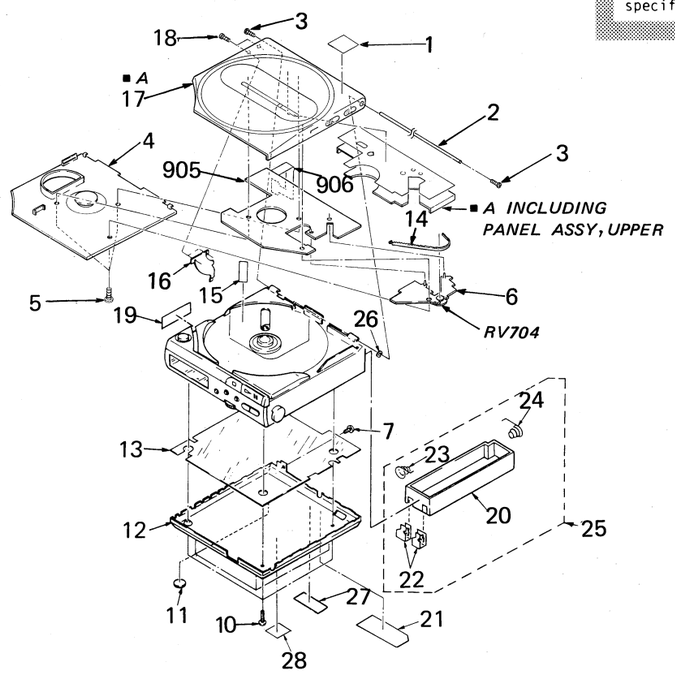
· Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

· The construction parts of an assembled part are indicated with a collation number in the remark column.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

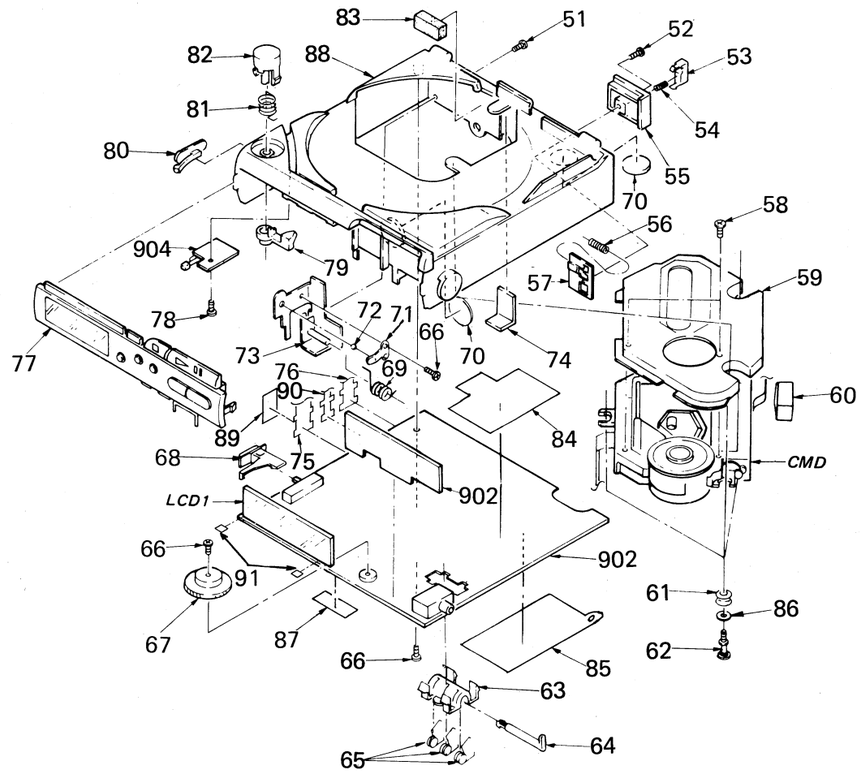
(1)



No.	Part No.	Description	Remarks
1	3-703-710-01	(Canadian,UK,AUS,AE5,AE6,IT,E) .....STICKER, SONY SYMBOL (12)	
	3-703-710-11	(US).....STICKER, SONY SYMBOL (12)	
2	4-918-810-01	SHAFT, FULCRUM	
3	4-908-792-31	SCREW (B2) (M2X4), TAPPING	
4	A-3039-444-A	COVER ASSY, TU	
5	3-893-942-01	SCREW (1.7X4), TAPPING (B)	
6	4-918-864-01	GUIDE, TU	
7	3-703-816-52	SCREW (M1.4X3.5), SPECIAL HEAD	
10	4-908-792-71	SCREW (B2X6), TAPPING, P1	
11	4-912-641-01	FOOT, RUBBER	
12	4-918-839-31	PANEL, BOTTOM	
13	4-918-816-01	SHEET, INSULATING, PC BOARD	
14	4-918-863-01	RACK, POINTER	
15	4-908-711-01	LABEL, CAUTION, LENS	
16	4-918-804-01	ARM, SWITCHING	
17	X-4918-814-1	(AE5,AE6)...PANEL ASSY,UPPER	
	X-4918-819-1	(IT).....PANEL ASSY,UPPER	
	X-4918-815-1	(US,Canadian,UK,AUS,E) ... PANEL ASSY, UPPER	

No.	Part No.	Description	Remarks
18	3-703-816-42	SCREW (M1.4X2.5), SPECIAL HEAD	
19	4-920-405-11	STICKER (L TYPE), HOLD SW	
20	4-918-838-01	(AE6)....CASE, BATTERY (BLACK)	
21	*4-918-857-01	(US,Canadian).....LABEL, MODEL NUMBER	
	4-920-409-01	(AUS,UK,E)...LABEL,MODEL NUMBER	
	4-920-415-01	(IT).....LABEL,MODEL NUMBER	
22	4-918-814-01	(AE6)....TARMINAL, (BATT)	
23	4-918-803-01	(AE6)....SPRING (BATT)	
24	2-298-630-01	(AE6)....SPRING (BATT) R	
25	X-4918-806-1	(AE6)...CASE ASSY, BATTERY (BLACK)	
26	4-918-886-01	WASHER, THRUST	
27	4-885-838-00	(AE5,AE6,IT,UK)...LABEL, CLASS 1	
28	4-920-414-01	(AE5).....LABEL,SP	
905	A-3015-499-A	(US,Canadian,UK,AUS,E) ....PC BOARD ASSY, RADIO	
	A-3015-515-A	(AE5,AE6)....PC BOARD ASSY, RADIO	
	A-3015-521-A	(IT).....PC BOARD ASSY, RADIO	
906	1-621-898-11	PC BOARD, RADIO FLEXIBLE	
RV704	1-237-139-11	RES, VAR, CARBON 100K (TUNING)	

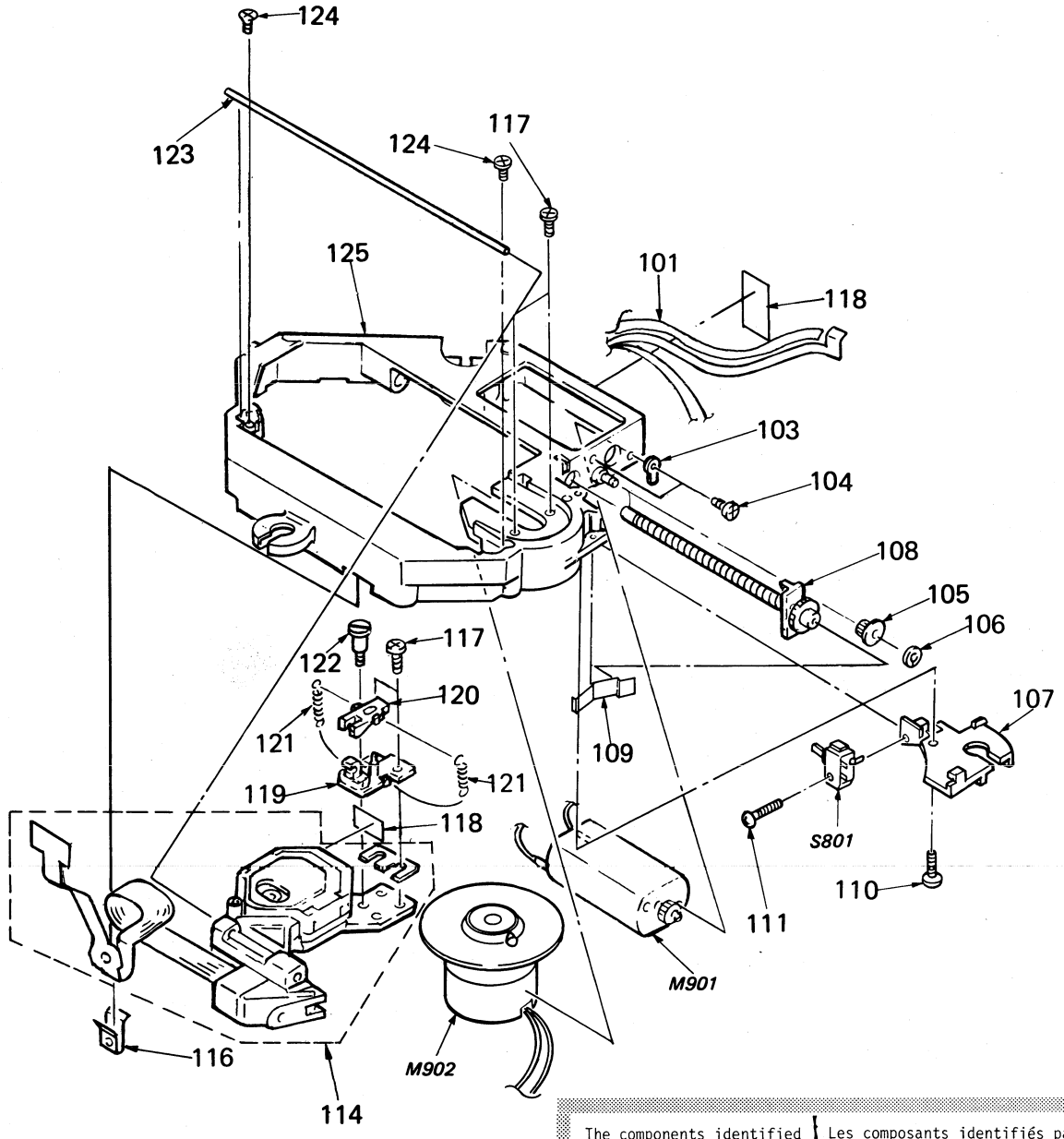
(2)



No.	Part No.	Description	Remarks
51	3-703-816-52	SCREW (M1.4X3.5), SPECIAL HEAD	
52	7-627-553-37	PRECISION SCREW +P 2X3 TYPE 3	
53	4-918-826-01	BUTTON, BT LOCK	
54	3-563-463-00	SPRING, COMPRESSION	
55	4-918-818-01	BUTTON, RELEASE	
56	4-918-871-01	SPRING, COMPRESSION	
57	*4-918-817-01	BRACKET, BT	
58	3-895-823-11	SCREW (B1.4X3), TAPPING	
59	*4-918-834-01	COVER, MD	
60	3-831-441-11	CUSHION (B)	
61	4-918-801-01	RUBBER (2150) (8)	
62	4-918-802-01	SCREW	
63	4-918-836-01	RETAINER, SPRING	
64	4-918-828-01	SHAFT, RETAINER, SPRING	
65	4-918-815-01	SPRING	
66	3-703-502-31	SCREW	
67	4-918-824-01	KNOB, VOLUME	
68	4-918-823-11	KNOB, HOLD	
69	4-918-805-01	SPRING	
71	4-918-806-01	SPRING	
72	7-671-155-01	STEEL BALL 3.0	
73	X-4918-801-1	BRACKET ASSY, SPRING	

No.	Part No.	Description	Remarks
74	*4-918-868-01	REINFORCEMENT	
75	*4-918-853-01	RETAINER (A), FLEXIBLE	
76	*4-918-854-01	RETAINER (B), FLEXIBLE	
77	X-4918-802-1	PANEL ASSY (BLACK), FRONT	
78	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT	
79	4-918-831-01	CLAW, LOCK	
80	4-918-811-01	BUTTON, SAFETY	
81	4-918-808-01	SPRING	
82	4-918-830-01	BUTTON, OPEN	
83	4-918-873-01	CUSHION	
84	4-918-877-01	PAPER (A), SHIELD	
85	*4-918-869-01	PAPER, SHIELD	
87	3-831-441-XX	SPACER AND CUSHION	
88	4-918-841-41	CABINET	
89	4-918-874-01	PAPER (M), SHIELD	
90	*4-918-858-01	RETAINER (C), FLEXIBLE	
91	*4-918-870-01	SPACER (LCD)	
902	*1-621-655-11	PC BOARD, CONTROL	
903	A-3015-501-A	PC BOARD ASSY, MAIN	
904	*1-621-654-11	PC BOARD, LEAF SW	

(3)



The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

No.	Part No.	Description	Remarks
103	7-623-505-01	LUG, 2	
104	7-627-853-47	PRECISION SCREW +P 2X4 TYPE 3	
105	4-917-607-01	GEAR (B)	
106	3-315-384-11	WASHER, STOPPER	
107	4-917-644-01	HOLDER, INSULATOR	
108	X-4917-602-1	SCREW ASSY, FEED	
109	4-917-643-01	SPRING	
110	3-896-913-11	SCREW (B2X6), P3 TAPPING	
111	3-896-913-21	SCREW (B2X8), P3 TAPPING	
114	⚠X-4917-716-1	PICKUP, OPTICS KSS 160A	
116	4-917-622-01	RETAINER, FLEXIBLE	
117	7-627-552-38	SCREW, PRECISION +P 1.7X3	

No.	Part No.	Description	Remarks
118	3-831-441-XX	CUSHION, STOPPER	
119	4-917-628-01	RACK (A)	
120	4-917-610-01	RACK (B)	
121	4-917-623-01	SPRING, TENSION	
122	4-917-647-11	SCREW, RACK STOPPER	
123	4-917-611-01	SHAFT (A)	
124	4-917-618-01	SCREW (B2X8), TAPPING, (+) (K)	
125	X-4917-606-1	CHASSIS ASSY, MD	
126	4-918-874-01	PAPER (M) SHIELD	
M901	X-4917-714-1	MOTOR ASSY, FEED	
M902	X-4917-608-1	MOTOR ASSY, CLV	
S801	1-570-771-11	SWITCH (LIMIT)	

SECTION 3
ELECTRICAL PARTS LIST

NOTE:
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
902	*1-621-655-11	PC BOARD, CONTROL			
903	A-3015-501-A	PC BOARD ASSY, MAIN			
904	*1-621-654-11	PC BOARD, LEAF SW			
905	A-3015-499-A	(US,Canadian,UK,AUS,E) ....PC BOARD ASSY, RADIO			
	A-3015-515-A	(AE5,AE6)...PC BOARD ASSY, RADIO			
	A-3015-521-A	(IT).....PC BOARD ASSY, RADIO			
906	1-621-898-11	PC BOARD, RADIO FLEXIBLE			
C101	1-163-205-00	CERAMIC CHIP	0.001MF	5%	50V
C102	1-163-207-00	CERAMIC CHIP	0.0012MF	5%	50V
C103	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C104	1-135-095-00	TANTAL. CHIP	1.5MF	20%	10V
C105	1-130-477-00	MYLAR	0.0033MF	5%	50V
C106	1-123-645-00	ELECT	33MF	20%	10V
C107	1-123-612-00	ELECT	2.2MF	20%	50V
C108	1-123-616-00	ELECT	4.7MF	20%	25V
C109	1-123-612-00	ELECT	2.2MF	20%	50V
C110	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C111	1-124-584-00	ELECT	100MF	20%	10V
C112	1-163-207-00	CERAMIC CHIP	0.0012MF	5%	50V
C114	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C201	1-163-205-00	CERAMIC CHIP	0.001MF	5%	50V
C202	1-163-207-00	CERAMIC CHIP	0.0012MF	5%	50V
C203	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C204	1-135-095-00	TANTAL. CHIP	1.5MF	20%	10V
C205	1-130-477-00	MYLAR	0.0033MF	5%	50V
C206	1-123-645-00	ELECT	33MF	20%	10V
C207	1-123-612-00	ELECT	2.2MF	20%	50V
C208	1-123-616-00	ELECT	4.7MF	20%	25V
C209	1-123-612-00	ELECT	2.2MF	20%	50V
C210	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C211	1-124-584-00	ELECT	100MF	20%	10V
C212	1-163-207-00	CERAMIC CHIP	0.0012MF	5%	50V
C214	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C301	1-130-475-00	MYLAR	0.0022MF	5%	50V
C302	1-123-645-00	ELECT	33MF	20%	10V
C303	1-123-644-61	ELECT	22MF	20%	10V
C305	1-124-635-00	ELECT	220MF	20%	6.3V
C306	1-130-475-00	MYLAR	0.0022MF	5%	50V
C307	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C308	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C309	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C310	1-124-292-00	ELECT	33MF	20%	6.3V
C311	1-124-292-00	ELECT	33MF	20%	6.3V
C313	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C314	1-123-612-00	ELECT	2.2MF	20%	50V
C315	1-163-038-00	CERAMIC CHIP	0.1MF		25V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C316	1-123-611-00	ELECT	1MF	20%	50V
C317	1-123-617-00	ELECT	10MF	20%	16V
C318	1-123-613-00	ELECT	3.3MF	20%	50V
C319	1-124-584-00	ELECT	100MF	20%	16V
C321	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C322	1-124-465-00	ELECT	0.47MF	20%	50V
C323	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C324	1-123-622-00	ELECT	22MF	20%	16V
C325	1-123-622-00	ELECT	22MF	20%	16V
C326	1-124-462-00	ELECT	10MF	20%	16V
C327	1-123-821-00	ELECT	47MF	20%	16V
C328	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C329	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C401	1-124-135-00	ELECT	470MF	20%	6.3V
C402	1-123-644-61	ELECT	22MF	20%	10V
C403	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C404	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C405	1-124-144-00	ELECT	220MF	20%	16V
C406	1-162-638-11	CERAMIC CHIP	1MF		16V
C407	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C408	1-162-638-11	CERAMIC CHIP	1MF		16V
C409	1-163-986-00	CERAMIC CHIP	0.027MF	10%	25V
C410	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C411	1-124-144-00	ELECT	220MF	20%	16V
C412	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C413	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C414	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C415	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C416	1-162-638-11	CERAMIC CHIP	1MF		16V
C418	1-123-622-00	ELECT	22MF	20%	16V
C419	1-123-612-00	ELECT	2.2MF	20%	50V
C420	1-123-821-00	ELECT	47MF	20%	16V
C421	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C422	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C423	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C501	1-123-617-00	ELECT	10MF	20%	16V
C502	1-163-074-00	CERAMIC CHIP	0.033MF	10%	25V
C503	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C504	1-123-610-00	CERAMIC CHIP	0.47MF	10%	25V
C505	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C506	1-123-645-00	ELECT	33MF	20%	10V
C507	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C508	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C509	1-123-645-00	ELECT	33MF	20%	10V
C510	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C512	1-124-584-00	ELECT	100MF	20%	10V
C513	1-163-074-00	CERAMIC CHIP	0.033MF	10%	25V
C514	1-123-645-00	ELECT	33MF	20%	10V
C517	1-123-617-00	ELECT	10MF	20%	16V
C518	1-123-617-00	ELECT	10MF	20%	16V
C519	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C520	1-163-074-00	CERAMIC CHIP	0.033MF	10%	25V
C521	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C522	1-123-616-00	ELECT	4.7MF	20%	25V
C523	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C524	1-123-645-00	ELECT	33MF	20%	10V
C526	1-123-644-61	ELECT	22MF	20%	10V
C527	1-123-645-00	ELECT	33MF	20%	10V
C528	1-163-081-00	CERAMIC CHIP	0.22MF		25V
C529	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C530	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C531	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C532	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C533	1-123-644-61	ELECT	22MF	20%	10V
C534	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C535	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C536	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C537	1-123-645-00	ELECT	33MF	20%	10V
C538	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C539	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C540	1-123-612-00	ELECT	2.2MF	20%	50V
C541	1-123-612-00	ELECT	2.2MF	20%	50V
C542	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C543	1-123-616-00	ELECT	4.7MF	20%	25V
C545	1-163-037-00	CERAMIC CHIP	0.022MF	10%	25V
C546	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C547	1-123-617-00	ELECT	10MF	20%	16V
C548	1-163-081-00	CERAMIC CHIP	0.22MF		25V
C549	1-163-081-00	CERAMIC CHIP	0.22MF		25V
C550	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C551	1-131-373-41	TANTALUM	22MF	10%	16V
C552	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C553	1-123-644-61	ELECT	22MF	20%	10V
C555	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V
C556	1-163-023-00	CERAMIC CHIP	0.015MF	10%	50V
C557	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C559	1-162-638-11	CERAMIC CHIP	1MF		16V
C560	1-163-013-00	CERAMIC CHIP	0.0022MF	10%	50V
C561	1-163-013-00	CERAMIC CHIP	0.0022MF	10%	50V
C601	1-135-100-21	TANTAL. CHIP	6.8MF	20%	6.3V
C602	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C603	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C604	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C701	1-163-013-00	CERAMIC CHIP	0.0022MF	10%	50V
C702	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C703	1-163-013-00	CERAMIC CHIP	0.0022MF	10%	50V
C704	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C705	1-163-088-00	CERAMIC CHIP	5PF	0.25PF	50V
C706	1-135-091-00	TANTAL. CHIP	1MF	20%	16V
C707	1-163-026-00	CERAMIC CHIP	0.01MF	10%	50V
C708	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C709	1-163-085-00	CERAMIC CHIP	2PF	0.25PF	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C710	1-163-129-00	CERAMIC CHIP	270PF	5%	50V
C710	1-163-610-00	(AEP ONLY)...CERAMIC CHIP	150PF	5%	50V
C711	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C712	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C713	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C714	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C715	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C717	1-135-091-00	TANTAL. CHIP	1MF	20%	16V
C720	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C725	1-135-091-00	TANTAL. CHIP	1MF	20%	16V
C728	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C729	1-135-104-00	TANTAL. CHIP	10MF	20%	4V
C730	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C731	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C732	1-163-081-00	CERAMIC CHIP	0.22MF		25V
C733	1-163-610-00	CERAMIC CHIP	150PF	5%	50V
C734	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C735	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C736	1-135-104-00	TANTAL. CHIP	10MF	20%	4V
C737	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C738	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C739	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C740	1-163-093-00	CERAMIC CHIP	10PF	0.25PF	50V
C741	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C742	1-135-104-00	TANTAL. CHIP	10MF	20%	4V
C743	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C744	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C745	1-135-103-00	TANTAL. CHIP	3.3MF	20%	4V
C746	1-135-083-00	TANTAL. CHIP	0.47MF	20%	25V
C747	1-135-072-21	TANTAL. CHIP	0.22MF	20%	35V
C748	1-135-083-00	TANTAL. CHIP	0.47MF	20%	25V
C749	1-163-205-00	CERAMIC CHIP	0.001MF	5%	50V
C750	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C751	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C752	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C753	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C754	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C755	1-135-103-00	TANTAL. CHIP	3.3MF	20%	4V
C756	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C757	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C758	1-135-104-00	TANTAL. CHIP	10MF	20%	4V
C759	1-135-096-21	TANTAL. CHIP	4.7MF	20%	10V
C761	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C762	1-135-104-00	TANTAL. CHIP	10MF	20%	4V
C763	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C764	1-135-096-21	TANTAL. CHIP	4.7MF	20%	10V
C765	1-135-096-21	TANTAL. CHIP	4.7MF	20%	10V
C766	1-135-096-21	TANTAL. CHIP	4.7MF	20%	10V
C767	1-135-096-21	TANTAL. CHIP	4.7MF	20%	10V
C768	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C769	1-135-092-21	TANTAL. CHIP	3.3MF	20%	16V
C770	1-135-091-00	TANTAL. CHIP	1MF	20%	16V
C771	1-135-091-00	TANTAL. CHIP	1MF	20%	16V
C772	1-135-104-00	TANTAL. CHIP	10MF	20%	4V
C773	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C776	1-163-063-00	CERAMIC CHIP	0.022MF	10%	50V
C777	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C778	1-163-013-00	CERAMIC CHIP	0.0022MF	10%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description		
C779	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C780	1-135-091-00	TANTAL. CHIP 1MF	20%	16V
C781	1-163-101-00	(AEP ONLY)...CERAMIC CHIP 22PF	5%	50V
C781	1-163-102-00	CERAMIC CHIP 24PF	5%	50V
C782	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C801	1-123-612-00	ELECT 2.2MF	20%	50V
C802	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C803	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C804	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C805	1-135-099-00	TANTAL. CHIP 2.2MF	20%	6.3V
C806	1-163-037-00	CERAMIC CHIP 0.022MF	10%	25V
CF701	1-567-338-65	FILTER, CERAMIC		
CF702	1-567-338-65	FILTER, CERAMIC		
CF703	1-567-338-65	FILTER, CERAMIC		
CN401	1-563-294-11	JACK, EXTERNAL POWER		
CN801	*1-564-098-00	CONNECTOR, BOARD TO BOARD 8P		
CT701	1-141-333-11	CAP, VAR, TRIMMER		
CT703	1-141-333-11	CAP, VAR, TRIMMER		
CT704	1-141-333-11	CAP, VAR, TRIMMER		
D101	8-719-101-23	DIODE 1SS123		
D102	8-719-101-23	DIODE 1SS123		
D201	8-719-101-23	DIODE 1SS123		
D202	8-719-101-23	DIODE 1SS123		
D301	8-719-938-72	DIODE SB01-05CP		
D302	8-719-938-75	DIODE SB05-05CP		
D303	8-719-938-75	DIODE SB05-05CP		
D305	8-719-100-35	ZENER DIODE RD5.6EB2		
D401	8-719-938-78	DIODE SB10-05PCP		
D402	8-719-938-78	DIODE SB10-05PCP		
D403	8-719-938-78	DIODE SB10-05PCP		
D404	8-719-101-23	DIODE 1SS123		
D405	8-719-938-75	DIODE SB01-05CP		
D406	8-719-100-05	DIODE 1S2837		
D407	8-719-938-75	DIODE SB01-05CP		
D501	8-719-938-75	DIODE SB05-05CP		
D502	8-719-938-75	DIODE SB05-05CP		
D503	8-719-938-75	DIODE SB05-05CP		
D504	8-719-938-75	DIODE SB05-05CP		
D505	8-719-938-75	DIODE SB05-05CP		
D506	8-719-938-75	DIODE SB05-05CP		
D507	8-719-938-75	DIODE SB05-05CP		
D508	8-719-938-75	DIODE SB05-05CP		
D509	8-719-938-75	DIODE SB05-05CP		
D510	8-719-100-05	DIODE 1S2837		
D701	8-719-939-02	VARACTOR DIODE SVC203CP (TUNING)		
D702	8-719-939-02	VARACTOR DIODE SVC203CP (TUNING)		
D705	8-719-928-03	VARACTOR DIODE KV1260MT2 (TUNING)		
D706	8-719-938-75	DIODE SB01-05CP		
D707	8-719-100-05	DIODE 1S2837		
D708	8-719-106-53	ZENER DIODE RD10M-B2		
D709	8-719-100-05	DIODE 1S2837		
D710	8-719-938-75	DIODE SB01-05CP		
D711	8-719-105-32	ZENER DIODE RD2.7M-B2		
D712	8-719-105-90	ZENER DIODE RD5.6M-B1		
D713	8-719-928-16	LED SLM-13VW (RADIO ON)		
D714	8-719-938-75	DIODE SB01-05CP		
D801	8-719-100-05	DIODE 1S2837		
D802	8-719-100-05	DIODE 1S2837		
D803	8-719-118-12	ZENER DIODE RD9.1EW		

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
D804	8-719-938-75	DIODE SB01-05CP			
D805	8-719-118-12	ZENER DIODE RD9.1EW			
D806	8-719-101-37	ZENER DIODE RD3.3EL2			
FL701	1-235-279-00	FILTER, BAND PASS			
IC101	8-759-603-27	IC M5201FP			
IC201	8-759-603-27	IC M5201FP			
IC301	8-752-323-88	IC CXD1140AM			
IC303	8-759-603-13	IC M5218FP			
IC304	8-759-603-37	IC M5216P			
IC401	8-759-937-36	IC TL1451ACNS			
IC402	8-759-939-07	IC BA9700F			
IC501	8-759-937-87	IC CXA1081Q			
IC502	8-752-031-65	IC CXA1082AQ			
IC503	8-759-135-80	IC UPC358G2			
IC504	8-759-924-58	IC CXA1083M			
IC505	8-759-924-58	IC CXA1083M			
IC601	8-752-322-32	IC CXD1130Q			
IC602	8-759-302-72	IC HM6116LFP-3			
IC701	8-759-923-96	IC CX10053B			
IC702	8-759-910-53	IC CX10054			
IC703	8-759-603-13	IC M5218FP			
IC801	8-759-113-28	IC UPD7503G-648-12			
IC802	8-759-912-55	IC S-81250HG			
IC803	8-759-700-07	IC NJM2903M			
J301	1-562-870-11	JACK (LINE OUT)			
J302	1-562-870-21	JACK (HEADPHONES)			
JR103	1-216-295-00	METAL CHIP	0	5%	1/10W
JR301	1-216-296-00	METAL CHIP	0	5%	1/8W
JR302	1-216-295-00	METAL CHIP	0	5%	1/10W
JR304	1-216-295-00	METAL CHIP	0	5%	1/10W
JR305	1-216-296-00	METAL CHIP	0	5%	1/8W
JR310	1-216-295-00	METAL CHIP	0	5%	1/10W
JR312	1-216-295-00	METAL CHIP	0	5%	1/10W
JR313	1-216-296-00	METAL CHIP	0	5%	1/8W
JR314	1-216-295-00	METAL CHIP	0	5%	1/10W
JR401	1-216-295-00	METAL CHIP	0	5%	1/10W
JR402	1-216-296-00	METAL CHIP	0	5%	1/8W
JR403	1-216-296-00	METAL CHIP	0	5%	1/8W
JR404	1-216-295-00	METAL CHIP	0	5%	1/10W
JR405	1-216-295-00	METAL CHIP	0	5%	1/10W
JR406	1-216-295-00	METAL CHIP	0	5%	1/10W
JR408	1-216-296-00	METAL CHIP	0	5%	1/8W
JR409	1-216-296-00	METAL CHIP	0	5%	1/8W
JR501	1-216-295-00	METAL CHIP	0	5%	1/10W
JR502	1-216-295-00	METAL CHIP	0	5%	1/10W
JR503	1-216-296-00	METAL CHIP	0	5%	1/8W
JR504	1-216-296-00	METAL CHIP	0	5%	1/8W
JR505	1-216-295-00	METAL CHIP	0	5%	1/10W
JR506	1-216-295-00	METAL CHIP	0	5%	1/10W
JR507	1-216-296-00	METAL CHIP	0	5%	1/8W
JR508	1-216-296-00	METAL CHIP	0	5%	1/8W
JR514	1-216-296-00	METAL CHIP	0	5%	1/8W
JR701	1-216-296-00	METAL CHIP	0	5%	1/8W
JR702	1-216-296-00	METAL CHIP	0	5%	1/8W
JR703	1-216-296-00	METAL CHIP	0	5%	1/8W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
JR704	1-216-296-00	METAL CHIP	0	5%	1/8W
JR705	1-216-295-00	METAL CHIP	0	5%	1/10W
JR707	1-216-295-00	METAL CHIP	0	5%	1/10W
JR708	1-216-296-00	METAL CHIP	0	5%	1/8W
JR712	1-216-296-00	METAL CHIP	0	5%	1/8W
JR713	1-216-296-00	METAL CHIP	0	5%	1/8W
JR714	1-216-296-00	METAL CHIP	0	5%	1/8W
JR715	1-216-296-00	METAL CHIP	0	5%	1/8W
JR716	1-216-295-00	METAL CHIP	0	5%	1/10W
JR717	1-216-295-00	METAL CHIP	0	5%	1/10W
JR719	1-216-295-00	METAL CHIP	0	5%	1/10W
JR720	1-216-295-00	METAL CHIP	0	5%	1/10W
JR721	1-216-296-00	METAL CHIP	0	5%	1/8W
JR722	1-216-296-00	METAL CHIP	0	5%	1/8W
JR723	1-216-296-00	METAL CHIP	0	5%	1/8W
JR724	1-216-296-00	METAL CHIP	0	5%	1/8W
JR725	1-216-296-00	METAL CHIP	0	5%	1/8W
JR726	1-216-296-00	METAL CHIP	0	5%	1/8W
JR727	1-216-296-00	METAL CHIP	0	5%	1/8W
JR728	1-216-296-00	METAL CHIP	0	5%	1/8W
JR729	1-216-296-00	METAL CHIP	0	5%	1/8W
JR730	1-216-296-00	METAL CHIP	0	5%	1/8W
JR731	1-216-296-00	METAL CHIP	0	5%	1/8W
JR732	1-216-296-00	METAL CHIP	0	5%	1/8W
JR733	1-216-295-00	METAL CHIP	0	5%	1/10W
JR734	1-216-296-00	METAL CHIP	0	5%	1/8W
JR735	1-216-296-00	METAL CHIP	0	5%	1/8W
JR736	1-216-296-00	METAL CHIP	0	5%	1/8W
JR737	1-216-296-00	METAL CHIP	0	5%	1/8W
JR738	1-216-296-00	METAL CHIP	0	5%	1/8W
JR739	1-216-296-00	METAL CHIP	0	5%	1/8W
JR740	1-216-296-00	METAL CHIP	0	5%	1/8W
JR741	1-216-295-00	METAL CHIP	0	5%	1/10W
JR742	1-216-295-00	METAL CHIP	0	5%	1/10W
JR745	1-216-296-00	METAL CHIP	0	5%	1/8W
JR746	1-216-295-00	METAL CHIP	0	5%	1/10W
JR748	1-216-295-00	METAL CHIP	0	5%	1/10W
JR749	1-216-295-00	METAL CHIP	0	5%	1/10W
JR750	1-216-295-00	METAL CHIP	0	5%	1/10W
JR751	1-216-295-00	METAL CHIP	0	5%	1/10W
JR752	1-216-295-00	METAL CHIP	0	5%	1/10W
JR753	1-216-296-00	METAL CHIP	0	5%	1/8W
JR754	1-216-296-00	METAL CHIP	0	5%	1/8W
JR755	1-216-295-00	METAL CHIP	0	5%	1/10W
JR756	1-216-295-00	METAL CHIP	0	5%	1/10W
JR757	1-216-295-00	METAL CHIP	0	5%	1/10W
JR758	1-216-295-00	METAL CHIP	0	5%	1/10W
JR801	1-216-296-00	METAL CHIP	0	5%	1/8W
JR802	1-216-295-00	METAL CHIP	0	5%	1/10W
L101	1-410-204-41	INDUCTOR CHIP 10UH			
L102	1-410-526-11	MICRO INDUCTOR 10UH			
L201	1-410-204-41	INDUCTOR CHIP 10UH			
L202	1-410-526-11	MICRO INDUCTOR 10UH			
L302	1-410-204-41	INDUCTOR CHIP 10UH			
L303	1-410-526-11	MICRO INDUCTOR 10UH			
L401	1-459-695-11	COIL (WITH CORE)			
L402	1-459-696-11	COIL (WITH CORE)			
L403	1-459-695-11	COIL (WITH CORE)			

ELECTRICAL PARTS

Ref.No.	Part No.	Description
L404	1-459-696-11	COIL (WITH CORE)
L501	1-410-526-11	MICRO INDUCTOR 10UH
L502	1-410-527-11	MICRO INDUCTOR 100UH
L503	1-410-527-11	MICRO INDUCTOR 100UH
L701	1-459-641-11	COIL (WITH CORE)
L702	1-459-642-11	COIL (WITH CORE)
L705	1-410-209-51	INDUCTOR CHIP 27UH
L706	1-410-196-11	INDUCTOR CHIP 2.2UH
L707	1-410-196-11	INDUCTOR CHIP 2.2UH
L708	1-410-204-41	INDUCTOR CHIP 10UH
L710	1-410-209-51	INDUCTOR CHIP 27UH
L711	1-402-131-11	ANTENNA, FERRITE-ROD (AM)
L712	1-410-209-51	INDUCTOR CHIP 27UH
L713	1-410-196-11	INDUCTOR CHIP 2.2UH
L801	1-410-336-11	INDUCTOR CHIP 220UH
LCD1	1-807-751-11	LCD MODULE
M901	X-4917-714-1	MOTOR ASSY, FEED
M902	X-4917-608-1	MOTOR ASSY, CLV
MF701	1-567-693-11	FILTER, CERAMIC
Q101	8-729-159-64	TRANSISTOR 2SD596
Q102	8-729-159-64	TRANSISTOR 2SD596
Q201	8-729-159-64	TRANSISTOR 2SD596
Q202	8-729-159-64	TRANSISTOR 2SD596
Q301	8-729-100-67	TRANSISTOR 2SC1623-L7
Q302	8-729-100-67	TRANSISTOR 2SC1623-L7
Q303	8-729-901-05	TRANSISTOR DTA124EK
Q304	8-729-901-05	TRANSISTOR DTA124EK
Q305	8-729-159-64	TRANSISTOR 2SD596
Q306	8-729-901-00	TRANSISTOR DTC124EK
Q307	8-729-159-64	TRANSISTOR 2SD596
Q308	8-729-162-44	TRANSISTOR 2SB624-BV4
Q309	8-729-903-10	TRANSISTOR FMW1
Q310	8-729-901-00	TRANSISTOR DTC124EK
Q311	8-729-162-44	TRANSISTOR 2SB624-BV4
Q401	8-729-806-75	TRANSISTOR 2SB1120
Q402	8-729-100-67	TRANSISTOR 2SC1623-L7
Q403	8-729-806-75	TRANSISTOR 2SB1120
Q404	8-729-901-46	TRANSISTOR DTA114YK
Q405	8-729-806-75	TRANSISTOR 2SB1120
Q406	8-729-901-00	TRANSISTOR DTC124EK
Q407	8-729-100-76	TRANSISTOR 2SA812
Q408	8-729-902-99	TRANSISTOR DTC114TK
Q501	8-729-101-07	TRANSISTOR 2SB798
Q503	8-729-901-00	TRANSISTOR DTC124EK
Q601	8-729-901-00	TRANSISTOR DTC124EK
Q701	8-729-200-87	TRANSISTOR 2SC2714Y
Q702	8-729-102-06	TRANSISTOR 2SC2223
Q703	8-729-102-08	TRANSISTOR 2SC2223-F14
Q706	8-729-102-08	TRANSISTOR 2SC2223-F14
Q707	8-729-159-64	TRANSISTOR 2SD596
Q708	8-729-903-62	TRANSISTOR 2SD1664-Q
Q710	8-729-159-64	TRANSISTOR 2SD596
Q711	8-729-271-22	TRANSISTOR 2SC2712G
Q712	8-729-162-44	TRANSISTOR 2SB624-BV4
Q713	8-729-901-01	TRANSISTOR DTC144EK

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
Q801	8-729-901-05	TRANSISTOR DTA124EK			
Q802	8-729-901-00	TRANSISTOR DTC124EK			
Q803	8-729-901-05	TRANSISTOR DTA124EK			
Q804	8-729-162-44	TRANSISTOR 2SB624-BV4			
Q805	8-729-100-67	TRANSISTOR 2SC1623-L7			
Q806	8-729-902-99	TRANSISTOR DTC114TK			
Q807	8-729-901-05	TRANSISTOR DTA124EK			
R101	1-216-329-11	METAL CHIP	5.1K	1%	1/10W
R102	1-216-336-11	METAL CHIP	47K	1%	1/10W
R103	1-216-333-11	METAL CHIP	15K	1%	1/10W
R104	1-216-747-11	METAL CHIP	33K	1%	1/10W
R105	1-216-085-00	METAL CHIP	33K	5%	1/10W
R106	1-216-333-11	METAL CHIP	15K	1%	1/10W
R107	1-216-328-11	METAL CHIP	4.3K	1%	1/10W
R108	1-216-333-11	METAL CHIP	15K	1%	1/10W
R109	1-216-037-00	METAL CHIP	330	5%	1/10W
R110	1-216-328-11	METAL CHIP	4.3K	1%	1/10W
R111	1-216-035-00	METAL CHIP	270	5%	1/10W
R112	1-216-202-00	METAL CHIP	1.5K	5%	1/8W
R113	1-216-073-00	METAL CHIP	10K	5%	1/10W
R114	1-216-033-00	METAL CHIP	220	5%	1/10W
R115	1-216-089-00	METAL CHIP	47K	5%	1/10W
R116	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R117	1-216-748-11	METAL CHIP	39K	5%	1/10W
R118	1-216-011-00	METAL CHIP	27	5%	1/10W
R119	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R120	1-216-073-00	METAL CHIP	10K	5%	1/10W
R121	1-216-073-00	METAL CHIP	10K	5%	1/10W
R122	1-247-891-00	CARBON	330K	5%	1/6W
R201	1-216-329-11	METAL CHIP	5.1K	1%	1/10W
R202	1-216-336-11	METAL CHIP	47K	1%	1/10W
R203	1-216-333-11	METAL CHIP	15K	1%	1/10W
R204	1-216-747-11	METAL CHIP	33K	1%	1/10W
R205	1-216-085-00	METAL CHIP	33K	5%	1/10W
R206	1-216-333-11	METAL CHIP	15K	1%	1/10W
R207	1-216-328-11	METAL CHIP	4.3K	1%	1/10W
R208	1-216-333-11	METAL CHIP	15K	1%	1/10W
R209	1-216-037-00	METAL CHIP	330	5%	1/10W
R210	1-216-328-11	METAL CHIP	4.3K	1%	1/10W
R211	1-216-035-00	METAL CHIP	270	5%	1/10W
R212	1-216-202-00	METAL CHIP	1.5K	5%	1/8W
R213	1-216-073-00	METAL CHIP	10K	5%	1/10W
R214	1-216-033-00	METAL CHIP	220	5%	1/10W
R215	1-216-089-00	METAL CHIP	47K	5%	1/10W
R216	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R217	1-216-748-11	METAL CHIP	39K	5%	1/10W
R218	1-216-011-00	METAL CHIP	27	5%	1/10W
R219	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R221	1-216-073-00	METAL CHIP	10K	5%	1/10W
R220	1-216-073-00	METAL CHIP	10K	5%	1/10W
R222	1-247-891-00	CARBON	330K	5%	1/6W
R302	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R303	1-216-027-00	METAL CHIP	120	5%	1/10W
R304	1-216-121-00	METAL CHIP	1M	5%	1/10W
R305	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R306	1-216-077-00	METAL CHIP	15K	5%	1/10W
R307	1-216-089-00	METAL CHIP	47K	5%	1/10W
R308	1-216-089-00	METAL CHIP	47K	5%	1/10W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R309	1-216-073-00	METAL CHIP	10K	5%	1/10W
R310	1-216-081-00	METAL CHIP	22K	5%	1/10W
R311	1-216-101-00	METAL CHIP	150K	5%	1/10W
R312	1-216-109-00	METAL CHIP	330K	5%	1/10W
R313	1-216-049-00	METAL CHIP	1K	5%	1/10W
R314	1-216-085-00	METAL CHIP	33K	5%	1/10W
R315	1-216-075-00	METAL CHIP	12K	5%	1/10W
R316	1-216-083-00	METAL CHIP	27K	5%	1/10W
R317	1-216-113-00	METAL CHIP	470K	5%	1/10W
R318	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R319	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R320	1-216-115-00	METAL CHIP	560K	5%	1/10W
R324	1-216-083-00	METAL CHIP	27K	5%	1/10W
R325	1-216-043-00	METAL CHIP	560	5%	1/10W
R328	1-216-009-00	METAL CHIP	22	5%	1/10W
R329	1-216-304-11	METAL CHIP	3.3	5%	1/10W
R401	1-216-083-00	METAL CHIP	27K	5%	1/10W
R402	1-216-073-00	METAL CHIP	10K	5%	1/10W
R403	1-216-045-00	METAL CHIP	680	5%	1/10W
R404	1-216-081-00	METAL CHIP	22K	5%	1/10W
R405	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R406	1-216-073-00	METAL CHIP	10K	5%	1/10W
R407	1-216-073-00	METAL CHIP	10K	5%	1/10W
R408	1-216-085-00	METAL CHIP	33K	5%	1/10W
R409	1-216-105-00	METAL CHIP	220K	5%	1/10W
R410	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R411	1-216-073-00	METAL CHIP	10K	5%	1/10W
R412	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R413	1-216-077-00	METAL CHIP	15K	5%	1/10W
R414	1-216-324-11	METAL CHIP	10K	1%	1/10W
R415	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R416	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R417	1-216-748-11	METAL CHIP	39K	1%	1/10W
R418	1-216-083-00	METAL CHIP	27K	5%	1/10W
R419	1-216-077-00	METAL CHIP	15K	5%	1/10W
R420	1-216-049-00	METAL CHIP	1K	5%	1/10W
R421	1-216-049-00	METAL CHIP	1K	5%	1/10W
R422	1-216-093-00	METAL CHIP	68K	5%	1/10W
R423	1-216-041-00	METAL CHIP	470	5%	1/10W
R424	1-216-041-00	METAL CHIP	470	5%	1/10W
R425	1-216-089-00	METAL CHIP	47K	5%	1/10W
R426	1-216-089-00	METAL CHIP	47K	5%	1/10W
R427	1-216-077-00	METAL CHIP	15K	5%	1/10W
R428	1-216-083-00	METAL CHIP	27K	5%	1/10W
R429	1-216-043-00	METAL CHIP	560	5%	1/10W
R430	1-216-089-00	METAL CHIP	47K	5%	1/10W
R431	1-216-089-00	METAL CHIP	47K	5%	1/10W
R432	1-216-089-00	METAL CHIP	47K	5%	1/10W
R501	1-216-024-00	METAL CHIP	91	5%	1/10W
R502	1-216-081-00	METAL CHIP	22K	5%	1/10W
R503	1-216-049-00	METAL CHIP	1K	5%	1/10W
R504	1-216-073-00	METAL CHIP	10K	5%	1/10W
R506	1-216-081-00	METAL CHIP	22K	5%	1/10W
R507	1-216-081-00	METAL CHIP	22K	5%	1/10W
R509	1-216-162-00	METAL CHIP	33	5%	1/8W
R510	1-216-162-00	METAL CHIP	33	5%	1/8W
R511	1-216-081-00	METAL CHIP	22K	5%	1/10W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R513	1-216-099-00	METAL CHIP	120K	5%	1/10W
R514	1-216-097-00	METAL CHIP	100K	5%	1/10W
R515	1-216-095-00	METAL CHIP	82K	5%	1/10W
R516	1-216-081-00	METAL CHIP	22K	5%	1/10W
R517	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R518	1-216-089-00	METAL CHIP	47K	5%	1/10W
R519	1-216-097-00	METAL CHIP	100K	5%	1/10W
R520	1-216-114-00	METAL CHIP	510K	5%	1/10W
R521	1-216-097-00	METAL CHIP	100K	5%	1/10W
R524	1-215-457-00	METAL	33K	1%	1/6W
R525	1-216-103-00	METAL CHIP	180K	5%	1/10W
R526	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R527	1-216-121-00	METAL CHIP	1M	5%	1/10W
R528	1-215-458-00	METAL	36K	1%	1/6W
R529	1-216-073-00	METAL CHIP	10K	5%	1/10W
R530	1-216-079-00	METAL CHIP	18K	5%	1/10W
R531	1-216-089-00	METAL CHIP	47K	5%	1/10W
R532	1-216-105-00	METAL CHIP	220K	5%	1/10W
R533	1-216-103-00	METAL CHIP	180K	5%	1/10W
R534	1-216-077-00	METAL CHIP	15K	5%	1/10W
R535	1-216-109-00	METAL CHIP	330K	5%	1/10W
R536	1-216-073-00	METAL CHIP	10K	5%	1/10W
R537	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R538	1-216-073-00	METAL CHIP	10K	5%	1/10W
R539	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R540	1-216-049-00	METAL CHIP	1K	5%	1/10W
R541	1-216-077-00	METAL CHIP	15K	5%	1/10W
R542	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R543	1-217-671-11	METAL CHIP	1	5%	1/10W
R544	1-217-671-11	METAL CHIP	1	5%	1/10W
R545	1-217-671-11	METAL CHIP	1	5%	1/10W
R546	1-217-671-11	METAL CHIP	1	5%	1/10W
R547	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R548	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R549	1-217-671-11	METAL CHIP	1	5%	1/10W
R550	1-217-671-11	METAL CHIP	1	5%	1/10W
R551	1-217-671-11	METAL CHIP	1	5%	1/10W
R552	1-217-671-11	METAL CHIP	1	5%	1/10W
R553	1-216-085-00	METAL CHIP	33K	5%	1/10W
R554	1-216-254-00	METAL CHIP	220K	5%	1/8W
R555	1-216-085-00	METAL CHIP	33K	5%	1/10W
R556	1-216-119-00	METAL CHIP	820K	5%	1/10W
R559	1-216-097-00	METAL CHIP	100K	5%	1/10W
R560	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R601	1-216-077-00	METAL CHIP	15K	5%	1/10W
R602	1-216-097-00	METAL CHIP	100K	5%	1/10W
R603	1-216-097-00	METAL CHIP	100K	5%	1/10W
R604	1-216-081-00	METAL CHIP	22K	5%	1/10W
R605	1-216-121-00	METAL CHIP	1M	5%	1/10W
R701	1-216-081-00	METAL CHIP	22K	5%	1/10W
R702	1-216-025-00	METAL CHIP	100	5%	1/10W
R703	1-216-089-00	METAL CHIP	47K	5%	1/10W
R704	1-216-089-00	METAL CHIP	47K	5%	1/10W
R705	1-216-113-00	METAL CHIP	470K	5%	1/10W
R706	1-216-025-00	METAL CHIP	100	5%	1/10W
R707	1-215-457-00	METAL CHIP	33K	5%	1/10W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R708	1-216-013-00	METAL CHIP	47	5%	1/10W
R709	1-216-113-00	METAL CHIP	470K	5%	1/10W
R710	1-216-085-00	METAL CHIP	33K	5%	1/10W
R711	1-216-113-00	METAL CHIP	470K	5%	1/10W
R712	1-216-089-00	METAL CHIP	47K	5%	1/10W
R713	1-216-013-00	METAL CHIP	33	5%	1/10W
R714	1-216-089-00	METAL CHIP	47K	5%	1/10W
R715	1-216-041-00	METAL CHIP	470	5%	1/10W
R716	1-216-037-00	METAL CHIP	330	5%	1/10W
R725	1-216-073-00	METAL CHIP	10K	5%	1/10W
R726	1-216-113-00	METAL CHIP	470K	5%	1/10W
R727	1-216-113-00	METAL CHIP	470K	5%	1/10W
R728	1-216-113-00	METAL CHIP	470K	5%	1/10W
R729	1-216-103-00	METAL CHIP	180	5%	1/8W
R730	1-216-113-00	METAL CHIP	470K	5%	1/10W
R731	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R732	1-216-109-00	METAL CHIP	330K	5%	1/10W
R733	1-216-049-00	METAL CHIP	1K	5%	1/10W
R734	1-216-073-00	METAL CHIP	10K	5%	1/10W
R735	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R736	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R737	1-216-105-00	METAL CHIP	220K	5%	1/10W
R738	1-216-109-00	METAL CHIP	330K	5%	1/10W
R739	1-216-105-00	METAL CHIP	220K	5%	1/10W
R740	1-216-091-00	METAL CHIP	56K	5%	1/10W
R741	1-216-748-11	METAL CHIP	39K	5%	1/10W
R742	1-216-037-00	METAL CHIP	330	5%	1/10W
R743	1-216-033-00	METAL CHIP	220	5%	1/10W
R744	1-216-113-00	METAL CHIP	470K	5%	1/10W
R745	1-216-049-00	METAL CHIP	1K	5%	1/10W
R746	1-216-073-00	METAL CHIP	10K	5%	1/10W
R747	1-216-049-00	METAL CHIP	1K	5%	1/10W
R748	1-216-073-00	METAL CHIP	10K	5%	1/10W
R749	1-216-037-00	METAL CHIP	330	5%	1/10W
R750	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R753	1-216-073-00	METAL CHIP	10K	5%	1/10W
R755	1-216-093-00	METAL CHIP	68K	5%	1/10W
R756	1-216-198-00	METAL CHIP	1K	5%	1/8W
R761	1-216-013-00	METAL CHIP	33	5%	1/10W
R762	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R763	1-216-174-00	METAL CHIP	100	5%	1/8W
R764	1-216-013-00	METAL CHIP	33	5%	1/10W
R765	1-216-013-00	METAL CHIP	33	5%	1/10W
R766	1-216-109-00	METAL CHIP	330K	5%	1/10W
R767	1-216-109-00	METAL CHIP	330K	5%	1/10W
R801	1-216-081-00	METAL CHIP	22K	5%	1/10W
R802	1-216-105-00	METAL CHIP	220K	5%	1/10W
R803	1-216-081-00	METAL CHIP	22K	5%	1/10W
R804	1-216-081-00	METAL CHIP	22K	5%	1/10W
R805	1-216-081-00	METAL CHIP	22K	5%	1/10W
R806	1-216-081-00	METAL CHIP	22K	5%	1/10W
R807	1-216-081-00	METAL CHIP	22K	5%	1/10W
R808	1-216-081-00	METAL CHIP	22K	5%	1/10W
R809	1-216-081-00	METAL CHIP	22K	5%	1/10W
R810	1-216-081-00	METAL CHIP	22K	5%	1/10W
R811	1-216-115-00	METAL CHIP	560K	5%	1/10W
R813	1-216-081-00	METAL CHIP	22K	5%	1/10W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R814	1-216-081-00	METAL CHIP 22K 5% 1/10W
R815	1-216-081-00	METAL CHIP 22K 5% 1/10W
R816	1-216-081-00	METAL CHIP 22K 5% 1/10W
R817	1-216-095-00	METAL CHIP 82K 5% 1/10W
R818	1-216-081-00	METAL CHIP 22K 5% 1/10W
R819	1-216-027-00	METAL CHIP 120 5% 1/10W
R820	1-216-115-00	METAL CHIP 560K 5% 1/10W
R823	1-216-115-00	METAL CHIP 560K 5% 1/10W
R824	1-216-091-00	METAL CHIP 56K 1% 1/10W
R826	1-216-094-00	METAL CHIP 75K 1% 1/10W
R827	1-216-101-00	METAL CHIP 150K 1% 1/10W
R830	1-216-115-00	METAL CHIP 560K 5% 1/10W
RV301	1-237-092-11	RES, VAR, CARBON 10K/10K (VOLUME)
RV401	1-228-993-00	RES, ADJ, CARBON 4.7K (VOLTAGE)
RV501	1-228-995-00	RES, ADJ, CARBON 22K (FOCUS)
RV502	1-228-995-00	RES, ADJ, CARBON 22K (TRACKING)
RV503	1-228-995-00	RES, ADJ, CARBON 22K **(EF BALANCE)**
RV504	1-228-996-00	RES, ADJ, CARBON 47K (FE BIAS)
RV505	1-228-991-00	RES, ADJ, CARBON 2.2K (PLL FLEF RUN)
RV701	1-230-989-11	RES, ADJ, METAL GLAZE 4.7K (MPX VCO)
RV702	1-230-991-11	RES, ADJ, METAL GLAZE 22K(TUNING VOLTAGE)
RV703	1-230-991-11	RES, ADJ, METAL GLAZE 22K(TUNING VOLTAGE)
RV704	1-237-139-11	RES, VAR, CARBON 100K (TUNING)
S401	1-554-509-21	SWITCH, SLIDE (HOLD)
S701	1-570-397-11	SWITCH, SLIDE (FM MODE)
S702	1-570-402-11	SWITCH, SLIDE (BAND/FM SENS)
S801	1-570-771-11	SWITCH (LIMITER)
S802	1-554-911-11	SWITCH, LEAF (OPEN/CLOSE)
S803	1-553-856-00	SWITCH, KEY BOARD (STOP)
S804	1-553-856-00	SWITCH, KEY BOARD (PLAY/PAUSE)
S805	1-553-856-00	SWITCH, KEY BOARD (FF)
S806	1-553-856-00	SWITCH, KEY BOARD (FR)
S807	1-553-856-00	SWITCH, KEY BOARD (AMS/SEARCH)
S808	1-553-856-00	SWITCH, KEY BOARD (PLAY MODE)
S809	1-553-856-00	SWITCH, KEY BOARD (REMAIN)
T701	1-404-690-11	TRANSFORMER, IF
T702	1-406-177-11	COIL
T703	1-448-302-11	TRANSFORMER, DC-DC CONVERTER
X301	1-567-737-11	VIBRATOR, CRYSTAL

ACCESSORY & PACKING MATERIAL

Part No.	Description
1-555-658-21	**(US,Canadian)...CORD, CONNECTION**
⚠1-463-691-11	**(US,Canadian)...ADAPTOR, AC (AC-930A)**
⚠1-463-700-11	**(UK).....ADAPTOR, AC (AC-930A)**
⚠1-463-701-11	**(AUS).....ADAPTOR, AC (AC-930A)**
⚠1-463-702-11	**(E).....ADAPTOR, AC (AC-950W)**
⚠1-463-705-11	**(AE5,IT).....ADAPTOR, AC (AC-AEP)**
⚠1-526-565-00	**(UK)...AC PLUG ADAPTOR**
1-528-220-11	(US.Canadian,UK,AE5,1T,AUS,E).... BATTERY, STORAGE, LEAD (BP-3)
3-765-899-11	(UK,AUS,AE5,AE6,IT,E)....MANUAL, INSTRUCTION
3-765-899-21	(US,Canadian)....MANUAL, INSTRUCTION
3-765-899-31	(Canadian).....MANUAL, INSTRUCTION
3-765-899-41	(UK,AUS,AE5,AE6,IT,E)... MANUAL, INSTRUCTION
3-795-748-21	(US)...SAFETY INSTRUCTIONS, HEADPHONE
4-917-797-01	(UK)...CARTION, HEADPHONE
4-917-770-01	(US.Canadian,AE5,AUS,E,UK)...CASE, ACCESSORY
4-917-781-01	BELT, CARRYING
4-918-888-01	CUSHION (RIGHT)
4-918-889-01	CUSHION (LEFT)
4-918-845-01	(Canadian)...INDIVIDUAL CARTON
4-918-890-01	(US).....INDIVIDUAL CARTON
4-918-895-01	(UK).....INDIVIDUAL CARTON
4-918-896-01	(AUS,AE5,IT).INDIVIDUAL CARTON
4-918-897-01	(AE6)..... INDIVIDUAL CARTON
4-920-407-01	BAG, PROTECTION
4-918-884-01	(US,Canadian)...SHEET, COVER
4-918-857-01	(US,Canadian)...LABEL, MODEL NUMBER
4-920-409-01	(AUS,UK,E).....LABEL,(E) MODEL NUMBER
4-920-415-01	(IT).....LABEL, MODEL NUMBER
8-952-266-94	(UK)....HEADPHONE, MDR-A10L/B SET
X-4918-806-1	(AE6)...CASE ASSY, BATTERY (BLACK)
3-703-710-01	(Canadian,UK,AUS,AE5,AE6,1T,E)... STICKER, SONY SYMBOL (12)
3-703-710-11	(US).....STICKER, SONY SYMBOL (12)
3-795-748-21	(UK)....SAFETY INSTRUCTIONS,HEADPHONE

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piece portant le numéro spécifié.

Sony Corporation
Audio Group

9-952-664-11

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